

Joint Pub 4-02.1



**Joint Tactics,  
Techniques, and Procedures  
for  
Health Service Logistics Support  
in Joint Operations**

Reproduced From  
Best Available Copy

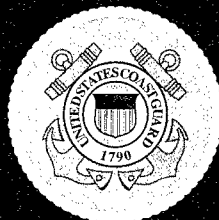


DISTRIBUTION STATEMENT A:  
Approved for Public Release -  
Distribution Unlimited

19981210 006



6 October 1997



## PREFACE

### 1. Scope

This publication provides for the planning and execution of theater health service logistics support (HSLS) for all Service components of a joint or multinational force, from alert notification to deployment to and redeployment from a theater. It provides fundamental principles and doctrine for HSLS in joint and multinational operations.

### 2. Purpose

This publication has been prepared under the direction of the Chairman of the Joint Chiefs of Staff. It sets forth doctrine and selected joint tactics, techniques, and procedures (JTTP) to govern the joint activities and performance of the Armed Forces of the United States in joint operations and provides the doctrinal basis for US military involvement in multinational and interagency operations. It provides military guidance for the exercise of authority by combatant commanders and other joint force commanders and prescribes doctrine and selected tactics, techniques, and procedures for joint operations and training. It provides military guidance for use by the Armed Forces in preparing their appropriate plans. It is not the intent of this publication to restrict the authority of the joint force commander (JFC) from organizing the force and executing the mission in a manner the JFC deems most appropriate to ensure unity of effort in the accomplishment of the overall mission.

### 3. Application

a. Doctrine and selected tactics, techniques, and procedures and guidance established in this publication apply to the commanders of combatant commands, subunified commands, joint task forces, and subordinate components of these commands. These principles and guidance also may apply when significant forces of one Service are attached to forces of another Service or when significant forces of one Service support forces of another Service.

b. The guidance in this publication is authoritative; as such, this doctrine (or JTTP) will be followed except when, in the judgment of the commander, exceptional circumstances dictate otherwise. If conflicts arise between the contents of this publication and the contents of Service publications, this publication will take precedence for the activities of joint forces unless the Chairman of the Joint Chiefs of Staff, normally in coordination with the other members of the Joint Chiefs of Staff, has provided more current and specific guidance. Commanders of forces operating as part of a multinational (alliance or coalition) military command should follow multinational doctrine and procedures ratified by the United States. For doctrine and procedures not ratified by the United States, commanders should evaluate and follow the multinational command's doctrine and procedures, where applicable.

For the Chairman of the Joint Chiefs of Staff:



DENNIS C. BLAIR  
Vice Admiral, US Navy  
Director, Joint Staff

---

## Preface

---

Intentionally Blank

## TABLE OF CONTENTS

	PAGE
EXECUTIVE SUMMARY .....	vii
CHAPTER I	
INTRODUCTION	
• Health Service Support Mission .....	I-1
• Overview of Joint Health Service Support .....	I-1
• Joint Health Service Logistics Support Mission .....	I-3
• Principles of Health Service Support .....	I-4
• Responsibilities for Health Service Logistics .....	I-5
CHAPTER II	
HEALTH SERVICE LOGISTICS CONSIDERATIONS	
• Health Service Logistics Support in Joint Operations .....	II-1
• Planning for Joint Health Service Logistics Support .....	II-1
• Medical Threat and Medical Intelligence .....	II-2
• Joint Operation Planning and Execution System .....	II-3
• Time-Phased Force and Deployment Data .....	II-3
• Transportation Considerations .....	II-4
• Communications Support Considerations .....	II-4
• Operational Considerations in a Nuclear, Biological, or Chemical Environment .....	II-6
• Overview of Service Component Health Service Logistics Systems .....	II-6
• Single Integrated Medical Logistics Manager .....	II-9
CHAPTER III	
STRUCTURING HEALTH SERVICE LOGISTICS SUPPORT	
• Transition .....	III-1
• Combat Service Support .....	III-1
• The Joint Force Surgeon .....	III-1
• Planning Considerations Prior to Deployment Notification .....	III-1
• Deployment .....	III-2
• Captured Medical Materiel .....	III-2
• Unit-to-Unit Exchange .....	III-3
• Aeromedical Evacuation Equipment and/or Patient Movement Items .....	III-3
CHAPTER IV	
REDEPLOYMENT OF HEALTH SERVICE LOGISTICS IN POSTCONFLICT ENVIRONMENTS	
• Redeployment Planning .....	IV-1
• Joint Force Surgeon Responsibilities .....	IV-1

---

## Table of Contents

---

• Redeployment Phases .....	IV-1
• Other Redeployment Considerations .....	IV-3
• Service Responsibility .....	IV-3

### CHAPTER V

#### HEALTH SERVICE LOGISTICS SUPPORT IN MILITARY OPERATIONS OTHER THAN WAR

• Military Operations Other Than War .....	V-1
• The Role of Joint Health Service Logistics .....	V-3
• Operational Missions .....	V-3
• Domestic Support .....	V-4
• Funding .....	V-5
• Planning Considerations .....	V-5

### CHAPTER VI

#### BLOOD MANAGEMENT

SECTION A. THE ARMED SERVICES BLOOD PROGRAM .....	VI-1
---	------

• General .....	VI-1
• Armed Services Blood Program Office .....	VI-1
• Service Blood Programs .....	VI-3
• Geographic Combatant Commands .....	VI-3

SECTION B. BLOOD SUPPORT IN THE CONTINUUM OF CARE .....	VI-4
---	------

• Blood Distribution System .....	VI-4
• Available Blood Products By Echelon .....	VI-7
• Blood Transfusion Practice By Echelon .....	VI-8

SECTION C. PLANNING FOR EFFECTIVE BLOOD MANAGEMENT .....	VI-8
--	------

• Coordination .....	VI-8
• Blood Planning .....	VI-10
• Host-Nation Support .....	VI-12
• Logistical Considerations of Blood Support .....	VI-12
• Maximum Capacities for Blood Product Shipments .....	VI-13

### CHAPTER VII

#### HEALTH SERVICE LOGISTICS SUPPORT IN MULTINATIONAL OPERATIONS

• Composition of Multinational Operations .....	VII-1
• Health Service Logistics Support Considerations .....	VII-1
• Cultural Diversity and Language .....	VII-2

## Table of Contents

### APPENDIX

A	Aeromedical Support Equipment and Supplies .....	A-1
B	Blood Management .....	B-1
C	Medical Logistic Systems for Battlefield Interoperability .....	C-1
D	References .....	D-1
E	Administrative Instructions .....	E-1

### GLOSSARY

Part I	Abbreviations and Acronyms .....	GL-1
Part II	Terms and Definitions .....	GL-4

### FIGURE

I-1	Health Service Support Echelons .....	I-2
I-2	Health Service Support Principles .....	I-4
I-3	Command Surgeon's Health Service Logistics Support Responsibilities .....	I-7
II-1	Planning for Joint Health Service Logistics Support .....	II-2
II-2	Communications Support Considerations .....	II-5
II-3	Single Integrated Medical Logistics Manager (SIMLM) .....	II-10
III-1	Patient Movement Item System .....	III-4
IV-1	Redeployment Issues .....	IV-1
IV-2	Redeployment Phases .....	IV-2
V-1	Principles of Health Service Logistics Support in Military Operations Other Than War .....	V-1
V-2	Selected Types of MOOTW Operations .....	V-3
V-3	Planning Considerations .....	V-6
VI-1	The Armed Services Blood Program .....	VI-1
VI-2	The Armed Services Blood Program Office Organization and Coordination .....	VI-2
VI-3	Armed Service Blood Distribution System .....	VI-6
VI-4	Blood Products (Class VIIIb) Available to the Theater .....	VI-8
VI-5	Blood Transfusion Practices by Echelon .....	VI-9
VI-6	Unit Group and Type Distribution .....	VI-11
VI-7	Blood Component Planning Factors .....	VI-12
VI-8	Maximum Capacities for Blood Product Shipments .....	VI-14
VII-1	Multinational Operations Problem Areas .....	VII-1
B-1	Master Menu Codes .....	B-2
B-2	Example of Message Blood Report .....	B-4
B-3	Example of Voice Blood Report .....	B-5
B-4	Example of Blood Shipment Report .....	B-6

---

## Table of Contents

---

Intentionally Blank

## EXECUTIVE SUMMARY

### COMMANDER'S OVERVIEW

- **Introduces Health Service Logistics Support (HSLs) Concepts**
  - **Covers Health Service Logistics Responsibilities and Considerations**
  - **Discusses Structuring HSLs**
  - **Explains Health Service Logistics in Postconflict Environments and Military Operations Other Than War**
  - **Outlines Blood Management Programs, Support, and Planning**
  - **Describes HSLs in Multinational Operations**
- 

### Introduction

*The health service support (HSS) mission to conserve the fighting strength and provide the combatant commander with a source of trained manpower is enhanced by health service logistics support (HSLs).*

Health service logistics support (HSLs) provides the required **Class VIII materiel and equipment** when and where it is needed on the battlefield. In joint operations, the combatant commander may exercise authority over the joint Class VIII system by designating a **single integrated medical logistics manager (SIMLM)** to oversee Class VIII efforts. **Health service support (HSS) in a theater of operations is provided by echelons.** Each echelon reflects an increase in medical capability while retaining the capabilities found in the preceding echelon. Within most theater of operations there are four echelons of care, with Echelon V in the continental United States (CONUS) support base. HSLs is one of the functional areas of HSS. As such, it requires comprehensive planning for inclusion in the HSS estimate and plan which supports the combatant commander's operation plan (OPLAN). The **joint HSLs mission** is to provide Class VIII supplies and equipment (medical materiel to include medical-peculiar repair parts), optical fabrication, medical equipment maintenance and repair, blood management, and medical gases.



---

## Executive Summary

---

### Responsibilities for Health Service Logistics

*The health service logistician needs to understand the principles of HSS and apply them to HSLs operations.*

The **Assistant Secretary of Defense for Health Affairs (ASD[HA])** establishes health policy and provides oversight of health policies being implemented by the Services' Surgeons General. **Within the Department of Defense**, two organizations play a prominent role in management of Class VIII materiel: the **Defense Logistics Agency (DLA)** and the **Defense Medical Standardization Board**. Upon the recommendation of the geographic combatant commander, the **Chairman of the Joint Chiefs of Staff** advises the **Secretary of Defense** on establishing a theater evacuation policy. The **Services' Surgeons General** provide guidance on HSLs policies to be implemented within their Services. The **combatant commander** has authority within his area of responsibility (AOR) for the execution of the HSLs mission. The command surgeon is the combatant commander's principal HSS advisor in theater and will normally serve as the joint force surgeon during joint operations. The command surgeon supervises the planning and execution of the HSS mission. The **Geneva Conventions** provide specific safeguards which apply to health service logistics materiel and personnel.

### Health Service Logistics Considerations

*For the HSS mission to be successfully accomplished, the appropriate supplies, maintenance, and transportation resources must be available.*

The health service logistics portion of the **HSS estimate and plan** ensures that a thorough and comprehensive analysis of health service logistics requirements is accomplished and incorporated into the overall HSS plan. By obtaining **medical intelligence** and by studying the **medical threat**, the health service logistician can predict, to some extent, the types of medical materiel that will be required for the mission. The **Joint Operation Planning and Execution System** assists the HSS planner to determine the gross HSS requirements based upon variables input by the planner, such as forces-at-risk, casualty admissions rates, and the evacuation policy. The **time-phased force and deployment data** is the computer supported portion of the OPLAN; it contains time-phased force non-unit-related cargo and personnel data as well as movement data for the OPLAN. The **ability to transport** needed medical supplies and equipment to the requesting unit is an essential part of the HSLs effort. **Communications systems** must be able to communicate on a continuous basis,

---

## Executive Summary

---

be interoperable, accessible to all users, and able to communicate the Class VIII requisitions and requirements from the forward battlefield to the supporting health service logistics facilities in the theater of operations and the sustaining base. The threat and possible use of **nuclear, biological, and chemical weapons** requires HSS personnel to protect themselves, their patients, equipment, and supplies throughout the AOR or joint operations area. The US Army, US Navy, US Marine Corps, and US Air Force each have **automated systems to assist in medical materiel management**. HSLs of **special operations forces** is mission dependent. When two or more Services are operating within the combatant commander's AOR, he may designate a Service as the **SIMLM**. By exercising his authority over the HSLs arena, the combatant commander can centralize control, reduce duplication of services, and provide the support in a more economical and efficient manner.

### Structuring Health Service Logistics Support

*Transitioning from a peacetime environment to mobilization, to deployment, to redeployment, and to demobilization will require extensive prior planning by the combatant commanders, Military Services, and the Joint Staff.*

The implementation and execution of **combat service support functions** are the responsibility of the Services and the Service component commanders. The commander of a combatant command (CINC) will designate a **joint force surgeon (JFS)** who will be responsible for preparing and coordinating HSS within the joint force. Units deploying to the operational area will **deploy with their authorized or tailored requirements** in accordance with appropriate Service doctrine. The Service components are required to resupply their respective units until the SIMLM is established and operational. As early as possible (OPLAN-dependent), an **advanced element from the assigned Service HSLs organization** should be deployed into the theater. Within the combat zone, medical units will normally accomplish a **one-for-one exchange of medical equipment** with the gaining activity at the time of patient transfer. The handling and return of equipment within the **aeromedical evacuation system** requires a reliable supporting logistics infrastructure to ensure that patient movement items (PMIs) are available and serviceable. The mission of the PMI system is to **support in-transit medical capability** without removing equipment from patients, to exchange in-kind PMIs without degrading medical capabilities, and to provide prompt recycling of PMIs.

---

## Executive Summary

---

### Redeployment of Health Service Logistics in Postconflict Environments

*Redeployment must be planned and executed in a manner that facilitates the use of redeploying forces and sustainment equipment and supplies to meet a new crisis.*

Based on the CINC's plan, the **Service component commanders issue a redeployment warning order** that conveys the CINC's redeployment guidance. The **command surgeon and staff must be actively involved** in establishing their redeployment policy as it pertains to medical units. **Redeployment is conducted in six phases:** reconstitution for strategic movement; movement to the redeployment assembly areas; movement to port of embarkation; strategic lift; reception at port of debarkation (POD); and onward movement from POD. **Non-unit redeployed equipment and supplies are redistributed** according to plans developed by the appropriate Service, with input from combatant commanders. The **DLA will play a major role** regarding any major redeployment of medical assets. The **logistics officer**, in coordination with the JFS, the DLA, and the Services, determines when the supply pipeline can be shut down. The **Services** are responsible for reconstitution of their Service elements used in the operation.

### Health Service Logistics Support in Military Operations Other Than War

*HSLS plays a significant role in the delivery of health care in military operations other than war.*

There are six joint principles which apply to **military operations other than war (MOOTW)**: objective, unity of effort, legitimacy, perseverance, restraint, and security. The medical commander and the health service logistics planner must use these principles to guide the planning and execution of the HSS mission. HSLS can provide **traditional logistic support** to deployed forces or may be incorporated into OPLANs for **other types of operations**. Prior to a deployment on a **noncombatant evacuation operation**, the senior medical person accompanying the force determines if there are any special medical supply or equipment requirements. In **disaster relief operations**, the management of Class VIII materiel is critical to the successful completion of the mission. In **humanitarian assistance operations**, the health service logistics planner must obtain and coordinate transportation and receive, sort, store, and distribute Class VIII materiel. In **nation assistance operations**, health service logistics personnel can assist a host nation by conducting an assessment of the military or civilian medical supply infrastructure and industry. In **peace support operations**, the HSLS mission is more the traditional support to a deployed force. **Domestic support** often includes disaster assistance based upon requests from civil authorities as a result of natural or manmade disasters.

---

## Executive Summary

---

A significantly important aspect of conducting MOOTW missions is the **funding mechanism** for the operation. The health service logistics planner must be **knowledgeable of the funding and reimbursement mechanisms** of the specific mission before obligating funds for health service materiel purposes. **Planning for MOOTW** uses the same planning process as that of any military operation.

### The Armed Services Blood Program

*The planning and execution for the effective management of blood and blood products is a continuing, dynamic process requiring a coordinated, highly responsive system that extends from the continental United States to the battlefield.*

Established by the ASD(HA), the **Armed Services Blood Program** provides transfusion products when required to US forces worldwide. Tri-Service cooperative efforts between the US Army, Navy, and Air Force enable blood and blood products to be collected, tested, processed, and shipped to military medical treatment facilities (MTFs) throughout the world. The **Armed Services Blood Program Office (ASBPO)** is chartered by the ASD(HA) to coordinate the collection and provision of blood products throughout the Services to meet medical requirements during national emergencies and overseas military operations.

**The Chairman of the Joint Chiefs of Staff** reviews and provides guidance on all matters pertaining to blood support in joint operation planning and execution as well as activation of the ASBPO in contingency and war. Each geographic combatant command maintains a **separate integrated system** for providing blood products to the various Service components' MTFs within the CINC's AOR. The theater combatant command **Joint Blood Program Office (JBPO)** serves as the overall blood manager within each command. The command surgeon may recommend the establishment of an **Area Joint Blood Program Office (AJBPO)** to provide regional blood management in the theater.

### Blood Support in the Continuum of Care

*Blood support in a theater of operations containing actual combat operations is a dynamic and ever-evolving process.*

Blood requires handling by individuals specially trained in blood movement and storage. To be successful, blood support must be an **organized and cooperative effort** on the part of health service logisticians, laboratory and blood bank personnel, transportation personnel, and primary health care providers. Theater blood support during wartime is provided to **US military facilities** and potentially, pursuant to proper authority, **allied and coalition military** as well as **indigenous civilian medical facilities**. Blood services in a theater of operations containing actual combat operations consist of a combination of operational capabilities. A **JBPO** or an

---

## Executive Summary

---

**AJBPO** will be responsible for the Joint Blood Distribution System within their geographic area.

MTFs will **maintain blood products on hand** necessary to meet operational requirements and submit a daily Blood Report to their supporting blood supply unit (BSU). The **mission of the BSU** is to receive, perform limited testing, store, process, and distribute blood products to its supported MTFs. The BSU may also collect blood on an emergency basis. The **Blood Product Depots (BPDs)** have been built into theater combatant commands to provide storage for frozen red blood cells and fresh frozen plasma. Theater combatant commands are responsible for ensuring that BPDs are maintained, manned, equipped, and supplied during peacetime operation. The **Blood Transshipment Centers** and **Transportable Blood Transshipment Centers** are managed by the US Air Force at primary airfields within the theater of operations. They receive blood products from the Armed Services Whole Blood Processing Laboratory, store them, and re-ice and distribute them to BSUs or MTFs when required.

### Planning for Effective Blood Management

*Continuous planning for mobilization and other contingencies enables the Services to rapidly respond to situations requiring blood support.*

A **coordinated effort** between the theater JBPO and the theater operations officer and plans officer is required for successful planning. **Blood Transshipment Center personnel** must have knowledge of the available Army blood bank platoons, BSUs, and the types and locations of the MTFs in the combat zone for proper planning. Blood planning factors are programmed by the **Joint Data Systems Support Center** and subsequently used by the respective combatant command medical planners to generate **daily blood product requirements** for the operational area. **Pre-positioned frozen blood products or blood shipped from CONUS** will reduce the requirements to collect blood in the operational environment. Capabilities to collect and process blood in the theater are limited.

Once located in the operational area, **it is necessary for the JBPO to maintain current information** on the combat situation and on the anticipated actions of friendly and enemy forces. Medical intelligence will provide additional information upon which to base **host-nation related decisions**. After the decision has been made on where to locate the blood banks and the concept of operations for blood support has been established, **plans must be coordinated** to effect the timely distribution of blood and blood products throughout the theater of operations.

---

## Executive Summary

---

### Health Service Logistics Support in Multinational Operations

Logistics support in multinational operations present **numerous challenges due to a variety of different policies, procedures, and practices**. Some of the problem areas that may be confronted include a difference in doctrine, differing stockage levels, logistics mobility, interoperability concerns, competition between participants for common support, and resource limitations. Close coordination and continuous liaison with all parties to an alliance or coalition is the key to a successful operation. The **North Atlantic Treaty Organization Standardization Agreements** and the **Quadripartite Standardization Agreements** have provided a mechanism for standardizing medical materiel. Based on these agreements, the HSLS planner can better estimate the interoperability capabilities of the combined forces. In multinational operations, **significant differences in both language and customs** will exist between the various participants. **Each individual Service member must be sensitive to these differences** and accommodate them when possible.

### CONCLUSION

This publication provides for the planning and execution of theater HSLS for all Service components of a joint or combined force, from alert notification to deployment to and redeployment from a theater. It provides fundamental principles and doctrine for HSLS in joint and multinational operations.

## Executive Summary

---

Intentionally Blank

## CHAPTER I INTRODUCTION

*"The great thing in all military service is health."*

Admiral Lord Nelson

### 1. Health Service Support Mission

The health service support (HSS) mission to conserve the fighting strength and provide the combatant commander with a source of trained manpower is enhanced by health service logistics support (HSLS). HSLS provides the required Class VIII materiel and equipment where needed on the battlefield. It is a Service component responsibility to provide Class VIII support to its own forces. In joint operations, the combatant commander may exercise directive authority over the joint Class VIII system by designating a single integrated medical logistics manager (SIMLM) to oversee Class VIII efforts.

### 2. Overview of Joint Health Service Support

a. HSS in a theater of operations is provided within echelons of care. Each echelon reflects an increase in medical capability while retaining the capabilities found in the preceding echelon, as shown in Figure I-1. Within a theater of operations there are four echelons of care, with Echelon V in the continental United States (CONUS) support base.

- Echelon I Care. Care is rendered at the unit and includes first aid (self-aid, buddy aid, and combat lifesaver [US Army] care), examination, and emergency lifesaving measures such as



*Health service logistics support ensures that equipment and materiel is provided where needed on the battlefield.*



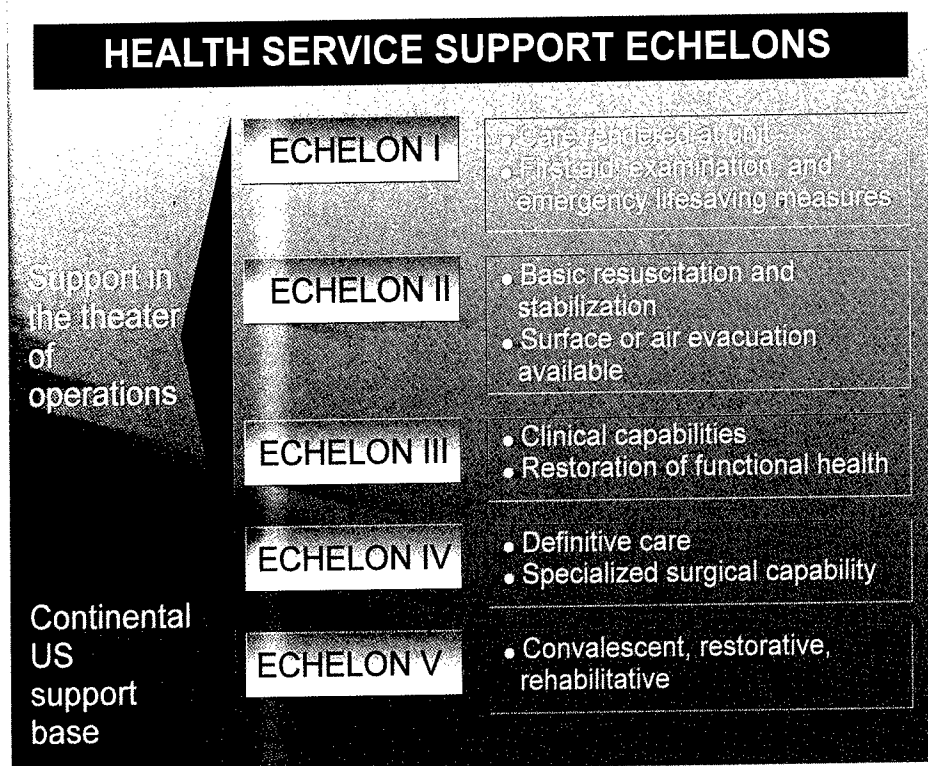


Figure I-1. Health Service Support Echelons

maintenance of an airway, control of bleeding, prevention and control of shock, and prevention of further injury. This echelon of care may include an **aid station that has a physician and/or medical officer or physician assistant**. The elements of medical care and management at this echelon prepare patients for return to duty or evacuation to a higher echelon of care.

- **Echelon II Care.** Echelon II care includes **basic resuscitation and stabilization** and may include limited surgical capability as well as basic laboratory, pharmacy, and temporary holding facilities. Surface or air evacuation to a medical treatment facility (MTF) is available for patients who require more comprehensive treatment.
- **Echelon III Care.** Care administered at Echelon III requires **clinical capabilities** normally found in an MTF staffed, equipped, and located in a lower level threat environment. Echelon III care may be the first step toward **restoration of functional health, as compared to procedures to stabilize a condition or prolong life**. Echelon III care may not have the crisis aspects of initial resuscitative care. Therefore, care at this echelon can proceed with greater deliberation. Limited specialty surgical capability is also available at this echelon.
- **Echelon IV Care.** Care is provided in an MTF staffed and equipped for **definitive care** and includes **specialized surgical capability**.

## Introduction

- **Echelon V Care.** Care is **convalescent**, **restorative**, and **rehabilitative** and is normally provided by CONUS-based military, Department of Veterans Affairs, and/or National Disaster Medical System (NDMS) hospitals.

b. Medical units plan and provide evacuation; hospitalization; health service logistics; medical laboratory service; blood management; preventive medicine; dental support; veterinary support; combat stress control; and command, control, and communications.

- Minimally, they should address:
  - Preventative medicine aspects of the food sanitation and water resources.
  - Command emphasis on hot or cold weather injury prevention.
  - Field sanitation procedures.
  - An aggressive program to protect US forces, to include disease surveillance, diagnosis, and early treatment.
  - Veterinary aspects of food sources.
- The nature of the mission in peace operations may result in more frequent and direct contact with the local population and increase the risk of acquiring many of the infectious and contagious endemic diseases of the country involved. For example, the malaria risk could be high because of increased mosquito vector populations from pools of water and favorable breeding sites following the monsoon season in some countries.
- Preventive medicine measures, disease surveillance and reporting, rapid disease outbreak investigation, field sanitation, water and ice quality analysis, veterinary

surveillance of food supplies and sources, command emphasis, and troop discipline at all levels significantly limit infectious disease and environmental health problems.

### 3. Joint Health Service Logistics Support Mission

**HSLS is one of the functional areas of HSS.** As such, it requires comprehensive planning for inclusion in the HSS estimate and plan which supports the combatant commander's operation plan (OPLAN).

#### a. The joint HSLS mission on the battlefield is to provide:

- Class VIII supplies and equipment (medical materiel to include medical-peculiar repair parts).
- Optical fabrication.
- Medical equipment maintenance and repair.
- Blood management.
- Medical gases.
- Contract support.

#### b. The Class VIII category is subdivided into Class VIIIa and Class VIIIb. (For the purposes of this publication, when the term Class VIII is used it refers to both Class VIIIa and Class VIIIb.)

- **Class VIIIa consists of all medical supplies and materiel, optical lens fabrication, medical equipment maintenance** (to include medical-peculiar repair parts), **and medical gases.** The subclasses which comprise this category include: controlled substances; tax-free alcohol; precious metals; nonexpendable and expendable

## Chapter I

medical and dental items; all drugs and related items listed in Federal Class 6505 but not otherwise restricted; designated controlled items on the advice of the command surgeon to the geographic combatant commander; and Service controlled sensitive items.

- **Class VIIIb is comprised of blood and blood products.** The subclasses which comprise this category include: whole blood, packed red blood cells (RBCs), frozen RBCs, fresh frozen plasma (FFP), and platelet concentrate.

c. The commander of a combatant command (CINC) may determine that **the joint HSLS mission may be more effectively accomplished by a SIMLM.**

### 4. Principles of Health Service Support

**There are six principles of HSS shown in Figure I-2.** The health service logistician needs to understand these principles and apply them to HSLS operations.

a. **Conformity.** The HSLS plan must support and be in consonance with the joint force commander's (JFC's) OPLAN. By participating in the development of the commander's OPLAN, the health service logistics planner can:

- Determine requirements.
- Plan the support needed to conform to the tactical operations.

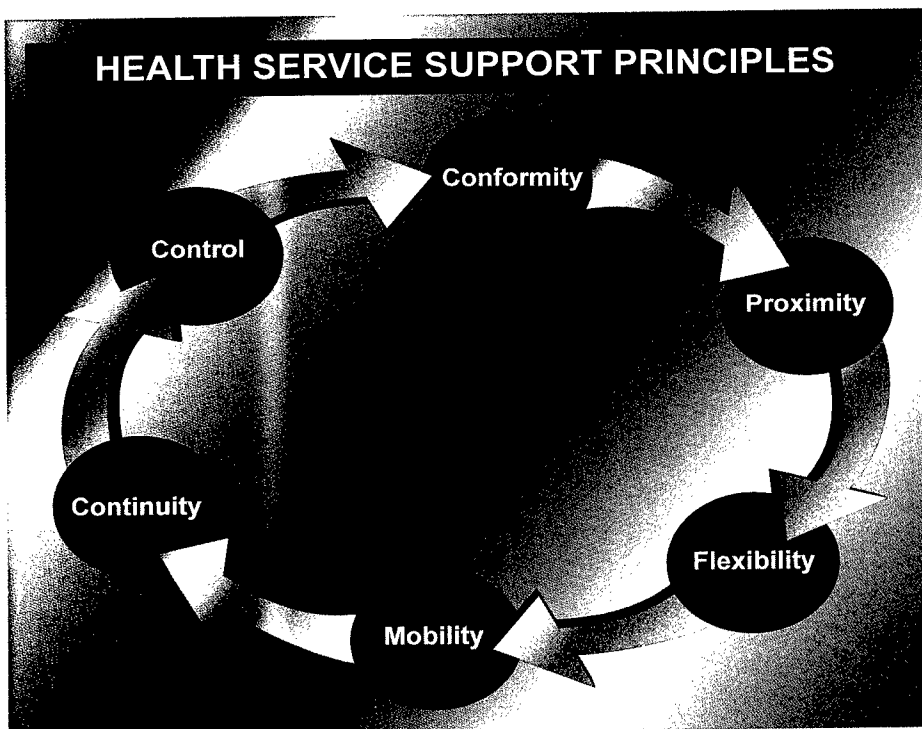


Figure I-2. Health Service Support Principles

## Introduction

b. **Proximity.** HSS must be provided to **sick, injured, and wounded Service members at the right place** to keep morbidity and mortality to the minimum. HSS resources are employed **as close to the combat area as possible**. Medical supplies and blood need to be moved to where they are accessible by forward treatment elements yet do not interfere with combat operations.

c. **Flexibility.** The health service logistician must remain abreast of the situation during war or military operations other than war (MOOTW) in order to **reallocate or cross-level Class VIII items** as changes to the OPLAN occur.

d. **Mobility.** Medical command and control headquarters must **continually assess and forecast unit movement and redeployment**. Health service logistics units must be **prepared to move** with the flow of the tactical operation or redeployment of supported units.

e. **Continuity.** Optimum care and treatment of the sick, injured, or wounded are provided by a progressive, phased echelon of care system. To ensure that treatment resources are maximized and morbidity and mortality reduced, **HSLS must provide the needed Class VIII supplies in the right**

**quantity at the right time and to the right place on the battlefield.** Continuity of quality health care is in part dependent upon the HSLS provided.

f. **Control.** HSS resources must remain **under the control and supervision of the command surgeon.** The unique requirements for the handling and storage of medical materiel is best accomplished by retaining control of a dedicated HSLS system.

## 5. Responsibilities for Health Service Logistics

a. **The Assistant Secretary of Defense for Health Affairs (ASD[HA]).** The ASD(HA) **establishes health policy** and provides **oversight of health policies** being implemented by the Services' Surgeons General. Within the Department of Defense (DOD), two organizations play a prominent role in management of Class VIII supplies.

- **The Defense Logistics Agency (DLA)** **is responsible for wholesale logistic operations.** The DLA, through the Directorate of Medical Materiel, Defense Personnel Support Center (DPSC), is the medical commodity manager. The agency obtains supplies at the wholesale level and coordinates transportation of

## HEALTH SERVICE SUPPORT IN KOREA

We moved into Koto-ri, nine and one half miles south of Hagaru, on the evening of November 25. There were no buildings to use and the temperature had dropped far below zero. The ground was frozen to a depth of 18 inches, making it impossible to use our regulation wooden tent pegs in anchoring the tents. We finally found a substitute ... Our original blood supply froze and hemolyzed; zephirin chloride solutions froze, plasma units froze....Plasma could be thawed successfully but when cold water was added, the solution gelatinized and refused to flow into a man's blood stream. We finally tied hot water bottles around the solution flask to administer plasma...At times the blood froze on the doctor's gloves during an operation.

**SOURCE: After Action Report  
1st Marine Medical Battalion In North Korea  
November 1950**

## Chapter I

those supplies to the port of embarkation (POE). For certain health service logistics, it will also coordinate transportation to the port of debarkation (POD) upon the redeployment of forces.

- **The Defense Medical Standardization Board (DMSB) coordinates and standardizes the clinical and technical aspects of medical materiel** for use by all Services by:

- Directing the development and standardization of approved deployable medical systems (DEPMEDS).

- Directing the development and modification of computer simulation modeling used to determine joint materiel requirements.

- Developing medical items substitution lists.

- Serving as the point of contact and maintaining liaison with the DLA and other government agencies for all clinical and technical matters pertaining to medical materiel.

b. **Chairman of the Joint Chiefs of Staff (CJCS).** In military operations, **the chain of command emanates from the National Command Authorities, to the respective CINC.** Upon the recommendation of the geographic combatant commander, the Chairman of the Joint Chiefs of Staff advises the Secretary of Defense on establishing a theater evacuation policy. **This policy establishes, in a number of days, the maximum period of noneffectiveness (hospitalization and convalescence) that patients may be held within the theater for treatment.** This policy, in turn, is one of the determining factors governing the establishment and operation of HSLS

facilities within the area of responsibility (AOR).

c. **The Services' Surgeons General.** The Services' Surgeons General **provide guidance on HSLS policies** to be implemented within their Services. **The Services coordinate the clinical, technical, and logistic aspects of all medical materiel.** Each Service component has organizational structures for coordinating medical and dental materiel support for units of the operating force and to cooperate with other offices, commands, and agencies in matters pertaining to health service logistics. **The Services provide this support through the following agencies:**

- Fleet Hospital Program Office (PML-500).
- Naval Supply Systems Command (NAVSUP).
- Naval Medical Logistics Command (NAVMEDLOGCOM).
- Air Force Medical Logistics Office (AFMLO).
- US Army Medical Materiel Agency (USAMMA).
- Marine Corps Systems Command.

d. **The Geographic Combatant Commanders.** **The CINC has directive authority within the AOR for the execution of the HSLS mission,** normally with the advice of the joint force surgeon (JFS). One way this authority may be exercised is by designating one of the Services within the AOR as the SIMLM. This facilitates the delivery of HSLS by centralizing control, reducing costs, and reducing redundancy of services within the theater of operations.

## Introduction

e. **Command Surgeon.** The command surgeon is designated to supervise the planning for the accomplishment of the HSS mission. The command surgeon's HSLS responsibilities are shown in Figure I-3.

f. **The Law of Armed Conflict.** The four Geneva Conventions of 1949 are a part of the law of armed conflict. These conventions provide specific protections for medical personnel, facilities, vehicles, and equipment that will apply, under most circumstances, to health service logistics materiel and personnel during an armed conflict.

- Medical personnel considered to be protected persons at all times and in all places include: (1) those personnel exclusively engaged in the search for, collection, transport, or treatment of the wounded or sick or in the prevention of disease; and (2) staff exclusively engaged in the administration of medical units and establishments. Under this protection HSLS personnel are not subject to attack, but are subject to lawful capture unless serving on board a hospital ship. If captured, they are not prisoners of war and may be retained only so long as the state of health of allied prisoners of war require.
- Auxiliary medical personnel are members of the armed forces specially trained for employment (should the need arise) as hospital orderlies, nurses, or

### COMMAND SURGEON'S HEALTH SERVICE LOGISTICS SUPPORT RESPONSIBILITIES

1. Maintain liaison with component surgeons and resolve health service logistics support (HSLS) conflicts surfaced by the joint task force (JTF) components
2. Provide detailed HSLS guidance, assign HSLS tasks, and develop a joint concept of operations. In the interest of maximizing the use of potentially limited health service support (HSS) resources, the JTF surgeon recommends to the JTF commander the joint use of HSS assets
3. Monitor JTF medical readiness to include component status on patient beds and health service logistics to include blood management and staffing
4. Coordinate HSLS provided to or received from allies or host nations during multinational operations
5. Prepare Annex Q for all JTF plans and orders
6. Advise the JTF commander on HSS aspects of the Geneva Conventions and the Law of Land Warfare
7. Supervise the activities of the Area Joint Blood Program, if established
8. Advise the commander on the disposition of captured medical materiel

Figure I-3. Command Surgeon's Health Service Logistics Support Responsibilities

## Chapter I

---

auxiliary stretcher-bearers in the search for, collection, transport, or treatment of the wounded and sick. If they are carrying out these duties at the time when they come into contact with the enemy, they are also considered protected persons and not subject to attack; however, auxiliary medical personnel who are captured are prisoners of war and may be retained until the end of hostilities.

- The status of HSLS personnel as either medical personnel or auxiliary medical personnel should be determined by the commander and appropriate identification cards should be issued in accordance with DOD directives. These personnel may be lightly armed for self-defense and should wear appropriate

markings identifying their status. They must also refrain from committing acts harmful to the enemy to retain their protected status.

- Fixed medical establishments and mobile medical units may not be attacked under any circumstances but must, as far as possible, be situated in such a manner that attacks against military objectives cannot imperil their safety. These establishments and units should be properly marked and may not be used in a manner constituting a hostile act. Medical material and stores may not be intentionally destroyed unless done so in the normal course of medical procedures, such as destroying medicines that are past their expiration date.

## CHAPTER II

### HEALTH SERVICE LOGISTICS CONSIDERATIONS

*"There are no stores, no surgeons, no drugs, and the hammocks are infected and loathsome, and the men stink as they go, and the poor rags they have are rotten and ready to fall off."*

Sir John Pennington  
Of conditions in the British Fleet, 1626

#### 1. Health Service Logistics Support in Joint Operations

Health service logistics is an integral part of the HSS system. **Timely and efficient HSLS enhances the quality of medical care delivered on the modern battlefield.** The execution of military missions in today's environment usually entails a joint force. Normally, **each Service component is responsible for providing HSLS to its own forces for the duration of an operation unless a SIMLM is appointed by the CINC.** However, even if a SIMLM has been established to manage and provide Class VIII support within the AOR, each Service component remains responsible for providing Service unique health service logistics items.

#### 2. Planning for Joint Health Service Logistics Support

a. For the HSS mission to be successfully accomplished, the appropriate supplies, maintenance, and transportation resources must be available. **The health service logistics portion of the HSS estimate and plan ensures that a thorough and comprehensive analysis of health service logistics requirements is accomplished and incorporated into the overall HSS plan.** Due to the technical nature of HSLS, coupled with the rapidly changing battlefield, the health service logistics planner must develop flexible plans.

b. The health service logistics estimate and plan are based on the elements in Figure II-1.

c. To develop a comprehensive plan, **the joint health service logistics planner must have a thorough understanding of the operational and tactical plans.** He must be aware of the potential for contingency missions beyond those for which a published plan has been developed. These contingency missions may arise with little or no prior notice. **The HSLS plan must also be sufficiently flexible** to accommodate changes in the stated mission and desired end state, as often occurs in MOOTW.

d. **The joint health service logistics planner determines the requirements for:**

- Sizes and locations of health service logistics organizations and installations required.
- Types of medical supplies needed.
- Supply procedures to be followed.
- Stock levels to be maintained.
- Medical equipment maintenance procedures.
- Optical fabrication procedures.



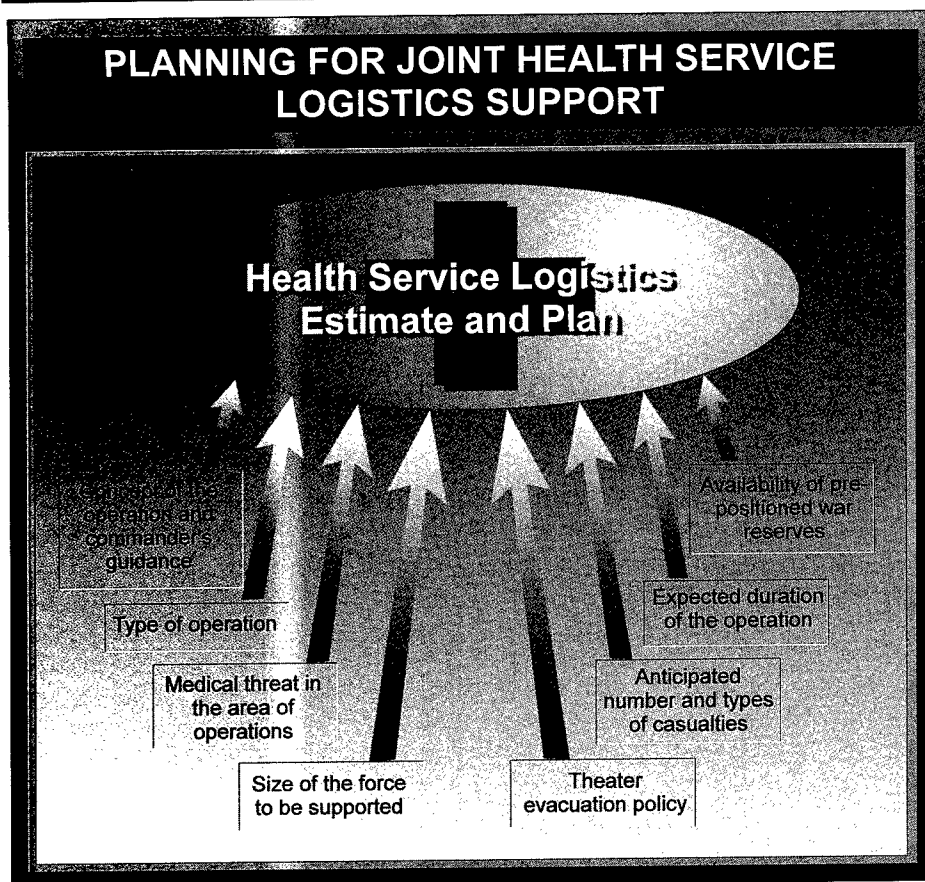


Figure II-1. Planning for Joint Health Service Logistics Support

- Procedures for obtaining medical oxygen and other medical gases.
- Disposal of unserviceable or outdated US medical equipment and supplies.
- Disposition of captured medical materiel.
- Preventative medicine support for all phases of the operation.

### 3. Medical Threat and Medical Intelligence

a. A significant planning consideration when developing the HSS estimate and plan is the medical threat. **The medical threat is a composite of all ongoing or potential**

**enemy actions and environmental conditions that may render a Service member combat-ineffective.** The Service members' reduced effectiveness results from sustained wounds, injuries, stress-induced performance deterioration, or diseases. **The elements of the medical threat include, but are not limited to:**

- Diseases endemic to the AOR.
- Environmental factors (heat, cold, humidity, and significant elevations above sea level).
- Level of compliance with the Law of Land Warfare and Geneva Convention requirements regarding respect and

---

## Health Service Logistics Considerations

---

protection of medical personnel, facilities, transportation, and medical materiel.

- The potential use of weapons of mass destruction.

b. **In developing the HSLS estimate and plan, the health service logistician obtains updated medical intelligence** through standard intelligence sources. Medical intelligence is the product resulting from the collection, evaluation, analysis, integration, and interpretation of all available general health and bioscientific information. Medical intelligence is concerned with one or more of the medical aspects of foreign nations or the AOR. Until medical information is appropriately processed (ordinarily on the national level by the Armed Forces Medical Intelligence Center), it is not considered to be intelligence.

c. By obtaining medical intelligence and by studying the medical threat, **the health service logistician can predict, to some extent, the types of medical materiel that will be required for the mission.** Further, when this prediction is considered in light of the casualty estimate, theater evacuation policy, and anticipated duration of the operation, the health service logistician can also forecast the expected quantities of materiel items that will be required.

### 4. Joint Operation Planning and Execution System

**The Joint Operation Planning and Execution System (JOPES) contains medical planning tools.** These tools assist the HSS planner to **determine the gross HSS requirements** based upon variables input by the planner such as forces-at-risk, casualty admissions rates, and the evacuation policy. The module uses these variables to calculate time-phased requirements for HSS. These requirements include:

a. Medical treatment facilities (beds and operating rooms).

b. Whole blood and fluids.

c. Class VIII supplies (by weight).

d. Medical evacuation resources.

### 5. Time-Phased Force and Deployment Data

a. Units and cargo deploying to a theater do so in a time-phased manner. **The time-phased force and deployment data (TPFDD) is a computer-supported portion of the OPLAN;** it contains time-phased force data, non-unit-related cargo and personnel data, and movement data for the OPLAN, including:

- In-place units.
- Units to be deployed to support the OPLAN with a priority indicating the desired sequence for their arrival at the POD.
- Estimates of non-unit-related cargo and personnel movements to be conducted concurrently with the deployment of forces.
- Estimate of movement requirements that must be fulfilled by common-user lift resources as well as those requirements that can be fulfilled by assigned or attached transportation assets.

b. **Health service logistics units** and their associated cargo **are prioritized for movement** on the time-phased force and deployment list.

c. To ensure continuous HSLS, **the health service logistician must factor in the priority of health service logistics unit and non-unit-related cargo for deployment.**



*Medical supplies are deployed by use of the medical planning module, which is an element of JOPES.*

This can be accomplished by ensuring that units deploy with an adequate number of days' supply to satisfy requirements until the non-unit-related medical materiel flow is established. This is accomplished by ensuring that units maintain their basic unit load in a combat-ready state.

### 6. Transportation Considerations

The ability to transport needed medical supplies and equipment to the requesting unit is an essential part of the HSLs effort. **Health service logistics planners at all echelons must ensure timely transport and delivery of Class VIII items.** The US Transportation Command provides strategic lift into the theater of operations. The health service logistics planner must ensure that **Class VIII materiel is properly prioritized on the TPFDD** to ensure its timely arrival in the operational area. The health service logistics planners within the AOR plan for the transportation of medical materiel from the POD to supporting supply facilities and then on to the requesting unit. **Health service logistics organizations use organic or assigned vehicles to transport the Class VIII materiel**, however they may require

transportation support from supporting communications zone (COMMZ) or corps transportation units. Medical evacuation vehicles returning to forward areas can backhaul Class VIII materiel to forward-deployed units. To retain the protections afforded under the Geneva Conventions, medical vehicles can only backhaul medical materiel. To carry other classes of supply would jeopardize this protected status.

### 7. Communications Support Considerations

See Figure II-2.

In joint operations, **the Services must be able to communicate on a continuous basis**; this is especially true in the HSLs arena. **Interoperability issues must be resolved early on** to ensure that timely and effective HSLs can be provided. Interoperability issues include not only hardware systems but also automated information systems (AIS) used by each Service.

a. **Communications systems** used can range from the simplest form such as a messenger or liaison officer to sophisticated satellite communications systems. Regardless

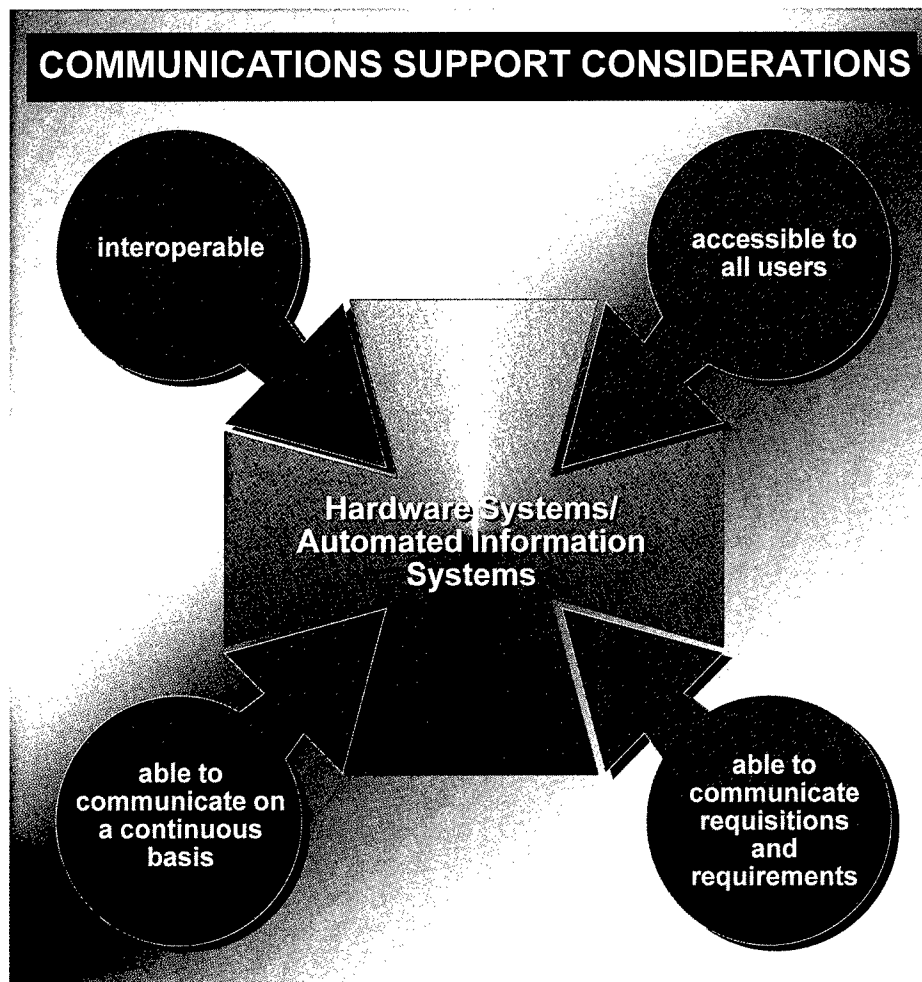


Figure II-2. Communications Support Considerations

of the method employed, it must be **accessible to all users** and must be **able to communicate the Class VIII requisitions and requirements** from the forward battlefield to the supporting health service logistics facilities in the theater of operations and the sustaining base. Requests should be made via the joint task force (JTF) common-user communications infrastructure.

b. **Class VIII requisitions must be processed as expeditiously as possible.** The health service logistician will track the status

of each requisition and, when required, stress the criticality of the item within the command structure. Access to the Defense Automatic Addressing System Office (DAASO), which is the hub for passing supply requisition files between the retail and wholesale levels, is essential and is accessible by the Unclassified but Sensitive Internet Protocol Router Network, through the JTF communications architecture, or through available commercial communications. Additional information is provided in Appendix C, "Medical Logistic Systems for Battlefield Interoperability."

## Chapter II

### 8. Operational Considerations in a Nuclear, Biological, or Chemical Environment

a. The threat and possible use of nuclear, biological, and chemical (NBC) weapons requires **HSS personnel to protect themselves, their patients, equipment, and supplies** throughout the operational area. The threat forces may introduce chemical or biological agents into MTFs, water sources or supplies, or foodstuffs. Further, supplies and equipment can become contaminated and may be damaged by some chemical agents or destroyed by nuclear weapons.

b. **Health service logisticians must plan to protect themselves and the Class VIII supplies for which they are responsible.** Health service logistics planners should plan on:

- Providing protection of medical units from NBC contaminants in order to survive and continue their mission.
- Protecting supplies during shipment and storage.
- Preventing the spread of contamination into storage and distribution areas.
- Monitoring exposure of Class VIII supplies to NBC agents during shipment to forward-deployed forces.
- Maintaining and enhancing survivability of vehicles and medical equipment.
- Decontaminating medical equipment.

c. **After NBC attacks, each affected unit must establish an inspection and decontamination point.** The inspection and decontamination process is conducted in accordance with the unit's OPLAN.

### 9. Overview of Service Component Health Service Logistics Systems

a. **United States Air Force.** During contingency operations, the United States Air Force (USAF) uses the **medical logistics (MEDLOG) system, mobile medical logistics (MOMEDLOG), or medical logistics, junior (MEDLOG JR)** to assist in medical materiel management. (MEDLOG JR is a smaller, more transportable computer system that can interface with laptop computers; MOMEDLOG is a laptop version of MEDLOG with similar capabilities, and is capable of stand-alone operation, complete with finance and procurement source interface.) Contingency hospitals (CHs) are equipped with a full sized MEDLOG AIS. The air transportable hospitals (ATHs) are equipped with MOMEDLOG. The MEDLOG JR is a simple inventory management tool that runs on a laptop computer in a disk-operating system environment, capable of producing documents for transmission to a supply source. Its use is normally restricted to assemblages other than CHs and ATHs. **Contingency HSLs operations mirror normal support to peacetime MTFs.** Both the ATH and the MTF health service personnel have the same health service logistic mission when deployed. **Stored operating supplies are funded through Air Force Working Capital Fund (AFWCF) assets.** As issues are processed, the AFWCF is reimbursed with operation and maintenance (O&M) funds. USAF assemblages are normally issued up front using a line of the USAF O&M funds to reimburse the AFWCF. Each assemblage deploys with a set number of days of supply and will require resupply support before the SIMLM is in place (if designated). The AFMLO has the capability of developing Air

## Health Service Logistics Considerations

---

Force Class VIII sustainment requirements data for specific operation plans. Contingency hospitals and ATHs can be equipped to requisition and receive supplies in a stand-alone mode from their home base, another support base, or other source of supply. **A CH or ATH may be designated as a SIMLM for a particular geographic area and a temporary period of time.** The designation is specified in the combatant commander's OPLAN. Transportation and communications augmentation must be provided from within theater to fulfill this mission.

b. **United States Navy.** The United States Navy (USN) operational concept is the same in peacetime as in war. **The USN supply system is integrated with the DLA supply system.**

- The primary contact points of all forces afloat, including the casualty receiving and treatment ships and the hospital ships (T-AHs), are the **Fleet and Industrial Supply Centers (FISC)** and the **combat logistics force (CLF) replenishment ships**. Supply is accomplished on a requisition demand basis via **military standard requisitioning and issue procedures (MILSTRIPs)**. If designated, a SIMLM manager can provide medical supply support, if requested, to forces afloat for common use, recurring demand-supported medical materiel items. Assistance, if requested, can be provided to the T-AH by the NAVMEDLOGCOM to obtain nonstandard medical materiel.
- **The CONUS MTFs are resupplied through the FISC, DPSC, and commercial sources** using the Micro-Medical Inventory Control System (MICRO-MICS).
- Outside of CONUS, **resupply of MTFs is provided through the FISC systems**

such as either Medical Inventory Control System, MICRO-MICS, or the Uniformed Automated Data Processing System and may interface with the Streamlined Automated Logistics Transfer System (SALTS) for transmitting requisitions and supply status.

- Fleet Hospitals use the Management Information System called Operational Fleet Hospital Information System (OFHIS) for medical resupply and use the Micro-Shipboard Non-Tactical Automated Data Processing System (MICRO-SNAP) for nonmedical resupply and financial management. Both OFHIS and MICRO-SNAP have inventory management capabilities and operate on stand alone personal computers (PCs). Resupply for Combat Zone Fleet Hospitals will be normally through the SIMLM.
- **Hospital ship resupply is provided through the FISC and CLF ships** using the NAVSUP's MICRO-SNAP Supply and Financial Management module, which interfaces with SALTS. During contingency operations, the SIMLM may be able to provide common-use, recurrent-demand medical materiel items.

c. **United States Marine Corps (USMC).** As a general rule, the USMC requisitions Class VIII materiel through the same channels as the other classes of supply. **The Supported Activities Supply System (SASSY) is the USMC supply system.** The authorized medical allowance list (AMAL) and the authorized dental allowance list (ADAL) are listed on the tables of equipment of a Marine expeditionary force (MEF) in an estimated worst case scenario through a 60-day period of combat. AMAL and/or ADAL requirements for medical and dental battalions can be task-organized to support the Marine air-ground task force (MAGTF) mission.

## Chapter II

---

- Under normal operating conditions, the medical logistics company (MEDLOGCO), supply battalion of the force service support group (FSSG) can **interface with the US Army MEDLOG battalion within the operational area.**
  - The AMAL and ADAL held in support of an MEF are categorized as either initial or war reserve. The initial issue quantities, both equipment and consumable, are employed by the using unit in support of peacetime deployments and training exercises. Use of an initial issue AMAL or ADAL carries with it an obligation and responsibility to replenish and maintain them in a combat-ready state. The war reserve AMALs or ADALs are maintained with the medical logistics companies, supply battalion, FSSGs, and with the maritime pre-positioned force squadrons.
  - **All HSS elements of an MAGTF deploy (mountout) with equipment and medical materiel sufficient to support a projected 15 days (minimum) of combat operations.** The medical and evacuation sections of the assault echelon are responsible for bringing ashore an initial 3 to 5 day supply of medical materiel. This is accomplished with mobile loading vehicles. Equipment and supplies remaining afloat are transferred to shore either on a demand basis or scheduled with ensuing waves of the assault echelon.
  - **Resupply under all circumstances is a command responsibility.** Medical department personnel needing resupply submit their requirements to the SASSY management unit (SMU) of the supply battalion, FSSG. The SMU will process and pass requisitions if unable to fill the requirement from its Class VIII inventory. There are MEDLOGCO representatives attached to all combat service support detachments and combat service support elements, and should be considered during HSS planning.
- d. **United States Army.** The USAMMA, a subordinate command of the US Army Medical Research and Materiel Command, maintains the Class VIIIa portion of the Army reserve (AR) materiel in accordance with US Army guidelines. **Class VIIIa war reserve (WR) requirements are identified through the Army's WR automated process.** Methods to fulfill the AR requirements are refined through a series of conferences with the combatant commands and their component commands. The USAMMA has the capability of developing Army Class VIII sustainment requirements data for a theater of operations.
- There are **four health service logistics organizations** within the Army structure. These organizations are the Theater Medical Materiel Management Center (TMMMC); the MEDLOG battalion, forward; the MEDLOG battalion, rear; and MEDLOG support detachments.
  - **Requests for Class VIII items at Echelons I, II, and attached forward surgical teams in the division is initially provided by preconfigured push packages** until line item requisition procedures can be established. Movement of medical materiel to forward-deployed units will be accomplished by ambulance backhaul or supply point distribution methods. **Resupply of Class VIII items in the division is accomplished by informal request of the lower element to the higher element.** For example, the combat medic is resupplied by the battalion aid station (BAS), and the BAS is resupplied by the forward support

## Health Service Logistics Considerations

---

medical company. Resupply of the medical companies is performed by the Division Medical Supply Office (DMSO).

- **The MEDLOG battalion provides supply, maintenance, and optical fabrication support** to the DMSO and elements located in the corps and, when situated in the COMMZ, supports all medical organizations located in echelons above corps.

- Health service materiel management is executed through the use of the **Theater Army Medical Management Information System**.

- In a mature theater, **a TMMMC may be established**. It is responsible for the centralized management of theater-level HSLS activities. Using automated systems, **the TMMMC manages Class VIII materiel, contracting services, and end items**. The TMMMC maintains in-transit visibility, redirects shipments upon CINC approval, and recommends theater-wide cross-leveling of Class VIII assets. If a SIMLM is designated for a theater of operations, the TMMMC may be designated.

e. **Special Operations Forces.** The commander-in-chief, US Special Operations Command, is a supporting CINC principally responsible for providing special operations forces (SOF) to the geographic combatant commanders.

- **Health service logistics support of SOF is mission-dependent.** The HSLS requirements are determined prior to deployment and are integrated into the OPLAN.

- SOF are responsible for **deploying with sufficient health service logistics materiel to support their operations until the supporting HSLS system is established**. Once the HSLS system is established, SOF will receive support on an area-support basis.

### 10. Single Integrated Medical Logistics Manager

See Figure II-3.

a. **When two or more Services are operating within the CINC's AOR, a Service may be designated as the SIMLM.** The SIMLM system encompasses the provision of medical supplies, medical equipment maintenance and repair, blood management, and optical fabrication to all joint forces within the theater of operations including, on an emergency basis, USN ships for common-use items. By exercising directive authority over the HSLS arena for the accomplishment of assigned missions, the CINC can centralize control, reduce duplication of services, and provide the support in a more economical and efficient manner. Further, **it is the CINC's responsibility to ensure coordination occurs among the Services HSLS systems**, that critical health service logistics resources are properly allocated, and that medical materiel requirements are accurately stated. The SIMLM assumes responsibility for planning and executing the HSLS mission for common-use medical items in that AOR.

b. In the European and Korean theaters, the US Army has been designated as the SIMLM. Although the US Army may be designated as the SIMLM in future missions because of a larger commitment of ground forces, **each Service should devise plans in the event they are designated the SIMLM.**



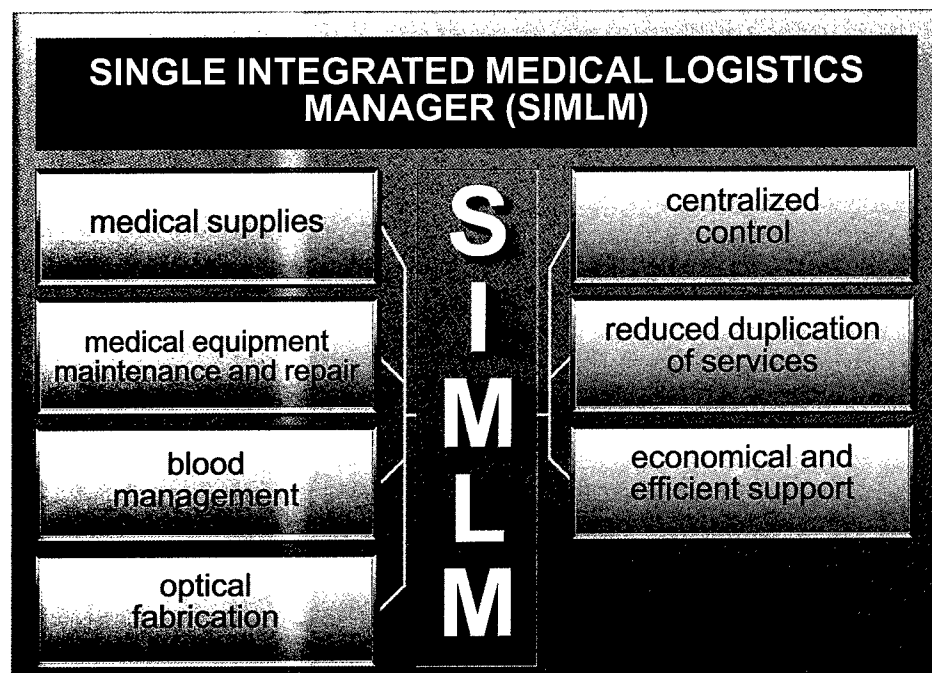


Figure II-3. Single Integrated Medical Logistics Manager (SIMLM)

---

## CHAPTER III

### STRUCTURING HEALTH SERVICE LOGISTICS SUPPORT

*"For the accommodation, comfort, and health of the Troops, the hair is to be cropped without exception, and the General will give the example."*

General Order of the Army  
Pittsburgh, 30 April 1801

#### 1. Transition

Defense Planning Guidance tasks the Military Services to prepare for major theater wars and MOOTW. In support of these operations, the CINC may elect to exercise combatant command (command authority) through a JTF. Transitioning from a peacetime environment to mobilization, to deployment, to redeployment (Chapter IV, "Redeployment of Health Service Logistics in Postconflict Environments") and to demobilization will require extensive prior planning by the CINCs, Military Services, and the Joint Staff.

#### 2. Combat Service Support

Elements of the US forces must be ready to deploy with supply stock levels commensurate with the OPLAN. **The implementation and execution of combat service support (CSS) functions are the responsibility of the Services and the Service component commanders.** The CINC exercises authority for logistics as specified in Joint Pub 0-2, "Unified Action Armed Forces (UNAAF)." Normally, this authority is exercised through subordinate JFCs and Service and/or functional component commanders. **The CINCs' directive authority over CSS operations does not release the Services from their responsibility to staff, equip, train, and sustain their own forces.** A SIMLM may be designated to provide centralized HSLS to all participating Services in the CINC's AOR.

#### 3. The Joint Force Surgeon

**The CINC may designate a JFS who will be responsible for preparing and coordinating HSS within the joint force.** Planning must concentrate on the CINC's CSS priorities, deploying force structure, and the mission. The JFS and his staff should consider and coordinate the use of all WR assets. Proper planning will provide the CINC with a tailorable force, deployment flexibility, and enhance force closure and sustainment of operations.

#### 4. Planning Considerations Prior to Deployment Notification

##### a. Health Services Logistics Operations

- **Medical Supply Support.** Units deploying to the operational area will **deploy with their authorized or tailored requirements** in accordance with appropriate Service doctrine. The Service components are required to resupply their respective units until the SIMLM is established and operational. The CINC ensures that **statements of the assigned forces' requirements are prepared and submitted** in accordance with existing directives of the Secretary of Defense, the Secretaries of Military Departments, and the Chiefs of the Services. Stock levels will be consistent with the nature of the contingency mission, the medical threat, climate, geography, and other factors related to the AOR.

## Chapter III

- **Single Integrated Medical Logistics Management.** The SIMLM must **recognize and support line item differences** which exist between various Service medical sets and assemblies. A consolidated recurring item list will be developed and maintained for medical line items required for support to the Services. This list should be used in conjunction with the D-Day Significant Item List, maintained by the DMSB, as the baseline catalog for support by the SIMLM. The SIMLM will also serve as the **source of supply** for obtaining nonrecurring requirements, including Service-unique items. This is necessary to avoid overwhelming the supply system with requirements not normally part of a unit's authorized allowance list. It is imperative that unit commanders exercise supply discipline by ordering non-standard items on an emergency basis only. Both push package and pull supply concepts will be employed in the resupply of deployed units. Maximum medical standardization should be an important part of any joint HSLs plan.

### b. Support Considerations

- **Refrigeration and temperature-controlled requirements.** Ensure that refrigeration and temperature-controlled storage is available.
- **Special handling.** Ensure that medical supplies, such as cylinders containing oxygen and medical gases, code R items, blood, and other hazardous materials requiring special handling are identified.
- **Facilities.** Facilities for forward medical logistics units must be planned for during the initial stages of deployment. These units require facilities with nearby lines of communications (LOCs) to establish full operations. Buildings of opportunity

are the first priority. If buildings are not available, tentage will have to suffice.

## 5. Deployment

**Deployment is the relocation of forces and material to desired areas of operations.**

Deployment encompasses all activities from origin or home stations through destination, specifically including intra-continental US, intertheater, and intratheater movement legs, staging, and holding areas (Joint Pub 4-0, "Doctrine for Logistic Support of Joint Operations").

a. **Advanced Deployment.** As early as possible (OPLAN-dependent) **an advanced element from the assigned Service HSLs organization should be deployed into the theater.** This advance element provides a cadre of personnel who can deploy in advance of follow-on HSLs forces to arrange and initiate required support such as, but not limited to, planning, coordinating, and implementing line item requisitioning and status, transportation, distribution, warehousing, and security. These activities should be under the supervision of the senior logistics headquarters in the operational area.

b. **Mobility.** The HSLs advanced element should be equipped so that it is **100 percent mobile** to enhance its support mission.

## 6. Captured Medical Materiel

**Captured medical materiel is not to be used for treatment of US personnel without specific approval of the command surgeon.** After clearance for safety and potential military medical intelligence, captured medical supplies and equipment may be used to treat enemy prisoners of war (EPWs) and detainees, and to provide humanitarian assistance for indigenous populations. Medical materiel is protected by the Geneva Conventions from intentional destruction.

## Structuring Health Service Logistics Support

### 7. Unit-to-Unit Exchange

Within the combat zone, medical units will normally accomplish a one-for-one exchange of medical equipment with the gaining activity at the time of patient transfer.

### 8. Aeromedical Evacuation Equipment and/or Patient Movement Items

See Figure III-1.

The medical equipment and supplies required to support the patient during evacuation are referred to as patient movement items (PMIs). **The handling and return of equipment to the aeromedical evacuation (AE) system requires a reliable supporting logistics infrastructure to ensure that PMIs are available and serviceable.** The plan for a PMI exchange system and the ultimate return of AE equipment and PMIs to the originating theater should be addressed in the OPLANs.

a. When a patient requires evacuation, it is the originating MTF's responsibility to provide the PMIs required to support the

patient during evacuation. **The PMIs accompany a patient throughout the chain of evacuation from the originating medical unit to the destination MTF**, whether it is an intratheater or intertheater transfer. The Services will include and maintain **initial quantities of DMSB-standardized PMIs** in the appropriate medical assemblages. They should not assume or plan for shortfalls of PMIs being satisfied by PMI centers. The Services, through the DMSB, will identify and approve PMI equipment items such as those currently listed in Appendix A, "Aeromedical Support Equipment and Supplies." **Medical equipment for use in AE must be certified for aircraft use by the Services' testing agencies.** To reduce medical equipment shortfalls experienced within the theater, the JFC must ensure procedures are established to resupply and refurbish PMIs.

b. **Patient Movement Item System.** The mission of the PMI system is to **support in-transit medical capability** without removing equipment from patients, to **exchange in-kind PMIs** without degrading medical capabilities, and to **provide prompt**



*Patient movement items accompany the patient through the aeromedical evacuation system.*

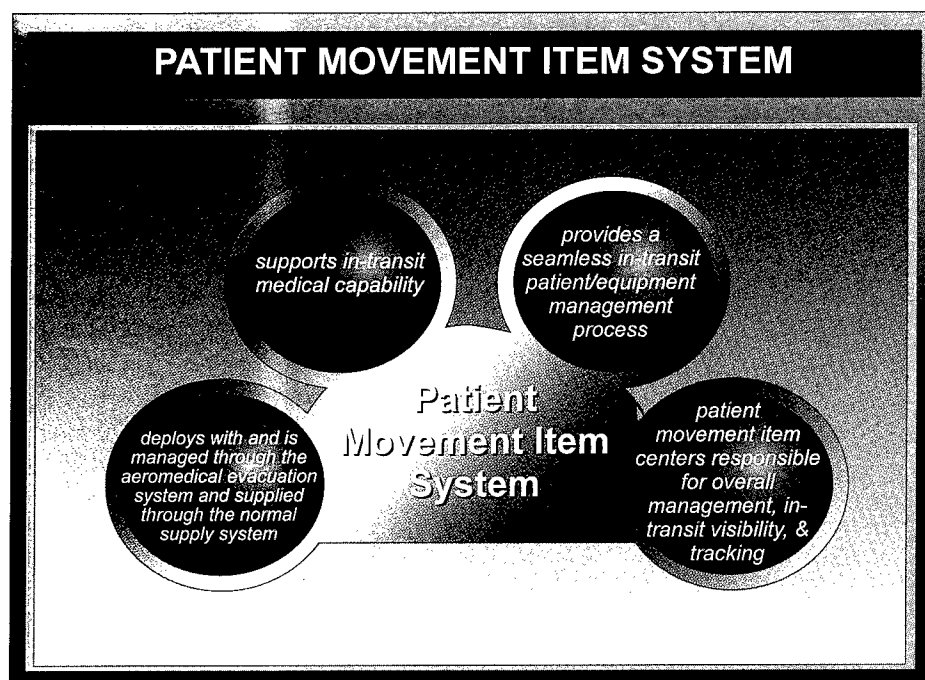


Figure III-1. Patient Movement Item System

**recycling** of PMIs. The PMI system comprises the management of PMI equipment and materiel. The PMI system will provide **seamless in-transit visibility for an equipment management process** from initial entry to the patient's final destination, the patient evacuation system. The Defense Medical Logistics Standard Support and/or Transportation Command's Regulating and Command and Control Evacuation System interface will be used ultimately to facilitate the management of PMIs. The PMI system will deploy with the AE system, be managed by the AE system, be supplied through the normal supply system, and collocated with the AE theater and/or strategic interfaces in order to provide initial AE operational capability, sustainment of AE operations, and minimize equipment turn around time.

c. **PMI Operations. Establishment of theater PMI centers is the responsibility of the USAF.** Air Force medical units will be tasked, trained, organized, and equipped to perform AE missions, including PMI

operations. PMI centers will be established to support worldwide theater requirements. PMI centers will be located at POEs and/or PODs within and outside CONUS to match AE support plans. PMI centers are responsible for the overall management, in-transit visibility, and tracking of PMIs. PMI centers will receive, refurbish (includes technical inspection, calibration, repair, and provide 3 days of expendable supplies), redistribute, and return PMIs collected from MTFs. The USAMMA may be required to provide the same level of maintenance support in CONUS if required. **PMI centers can be augmented with personnel and equipment from the other Services** in the event of surge and sustained requirements. Service liaison personnel can also be assigned. At the time an MTF initiates a patient movement request requiring PMIs, the PMI center or cell will initiate action for exchange of in-kind PMIs. The MTFs will clean the PMI equipment before returning it to another facility, PMI cell, center, or transportation point. **Intratheater**

---

## Structuring Health Service Logistics Support

---

**movement of PMI equipment is the responsibility of the CINC, executed by AE forces.**

d. PMI centers incorporate and support PMI cells. **PMI cells are a flexible subset of the PMI center, capable of establishing a forward PMI equipment exchange location.** PMI cells will support PMI exchange as far forward as theater AE patient movement is approved to operate. PMI cells will be deployed to forward operating locations to support one or more forward medical elements by pushing PMIs to those locations. **These PMI centers and cells will require base operating support** supplied by local operational support elements. As the theater matures and a SIMLM is established, **the PMI centers and cells will coordinate as necessary with the SIMLM** to obtain

support in the areas of requisitioning, storage, maintenance, and battlefield distribution of PMI-related items. Forward battlefield distribution and exchange of PMIs will be a SIMLM or Service responsibility. The plan for a PMI exchange system and the return of PMIs to the originating MTF will be addressed in theater OPLANs.

e. **Initial theater PMI requirements will be supported by deployable modular kits called patient evacuation contingency kits (PECKs),** to be provided by the PMI centers and cells. PECKs will augment theater PMI centers and cells until they are fully established with their preplanned inventory levels. A PECK supports the medical evacuation of 30 patients (see Appendix A, "Aeromedical Support Equipment and Supplies," for contents).

Intentionally Blank

## CHAPTER IV

### REDEPLOYMENT OF HEALTH SERVICE LOGISTICS IN POSTCONFLICT ENVIRONMENTS

*"No price is too great to preserve the health of the fleet."*

Lord St. Vincent

#### 1. Redeployment Planning

Redeployment must be planned and executed in a manner that facilitates the use of redeploying forces and sustainment equipment and supplies to meet a new crisis. In most cases, redeployment is intertheater or strategic. Redeployment is, in fact, a new deployment; either back to a unit's original home station, or to new duty stations to meet new crises. (The key to redeployment is that it should not be considered as a retrograde movement, but in fact, a new deployment.) Based on the CINC's plan, the Service component commanders issue a redeployment warning order that conveys the CINC's redeployment guidance. This guidance may include disposition instructions for Class VIII materiel or for reconstitution of forces.

#### 2. Joint Force Surgeon Responsibilities

The JFS must be actively involved in establishing redeployment policy as it pertains to medical units. The items shown in Figure IV-1 are some critical issues that the HSS planner must consider when redeploying.

#### 3. Redeployment Phases

During redeployment, contracts for transportation of materiel and maintenance can be used extensively to reconstitute the force. Redeployment is conducted in six phases shown in Figure IV-2.



Figure IV-1. Redeployment Issues



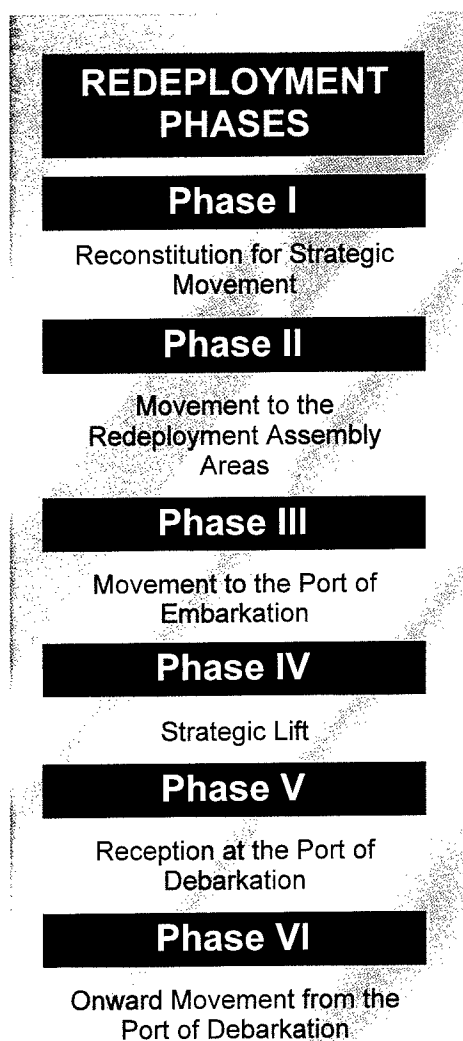


Figure IV-2. Redeployment Phases

a. **Phase I: Reconstitution for Strategic Movement.** Once the forces move back to the tactical assembly area, the major focus should be on **rebuilding unit integrity and accountability** to the maximum extent possible for units, individuals, materiel, supplies, and equipment. **Commander's actions include:**

- Turn-in of excess Class VIII supplies and unique medical equipment.

- Reconstitution and/or initial cross-leveling of medical materiel.

- Cleaning, repacking, and loading containers under US Customs and US Department of Agriculture supervision (if necessary). Hospital assemblages should be packed in order to avoid damage during shipment.

b. **Phase II: Movement to the Redeployment Assembly Areas (RAAs).** Once the medical component is moved into the RAA, **the commander completes the activities that could not be accomplished in Phase I**, such as washing major end items, palletizing equipment, and obtaining US Customs and Department of Agriculture inspections on all unit equipment.

c. **Phase III: Movement to the Port of Embarkation.** Movement to POE **may require a separate, agriculturally sterile area.** Proximity to the loading dock may reduce and/or eliminate agricultural clearance compromises.

d. **Phase IV: Strategic Lift.** The CINC coordinates the use of land, sea, and air transportation assets, facilities assigned to the command, and the use of allocated common-user resources.

e. **Phase V: Reception at the POD.** Commanders should provide advance parties to **coordinate the reception and processing of redeploying forces and their equipment** at the POD and for the movement to their follow-on destinations. Onward movement will heavily involve Military Traffic Management Command.

f. **Phase VI: Onward Movement from the POD.** This phase begins with reorganization of forces, receipt and repair of sustainment equipment and supplies, and

---

## Redeployment of Health Service Logistics in Postconflict Environments

---

movement to designated marshalling areas outside the processing area, and concludes with arrival at their destination.

### 4. Other Redeployment Considerations

a. **Non-unit redeployed equipment and supplies are redistributed** according to plans developed by the appropriate Service, with input from CINCs. **Priority of effort is generally given to Service forces committed to CJCS-approved OPLANs.** Other recipients may include US Army Materiel Command, DLA, and General Services Administration distribution centers. In the redistribution process equipment may be available for foreign military sales, or a grant program such as excess defense articles, to support national interests and policies.

b. **The DLA will play a major role regarding any major redeployment of medical assets.** Unified and component MEDLOG organizations must coordinate with DLA representatives in the following ways:

- **The Defense Reutilization Marketing Service.** Medical logistics planners

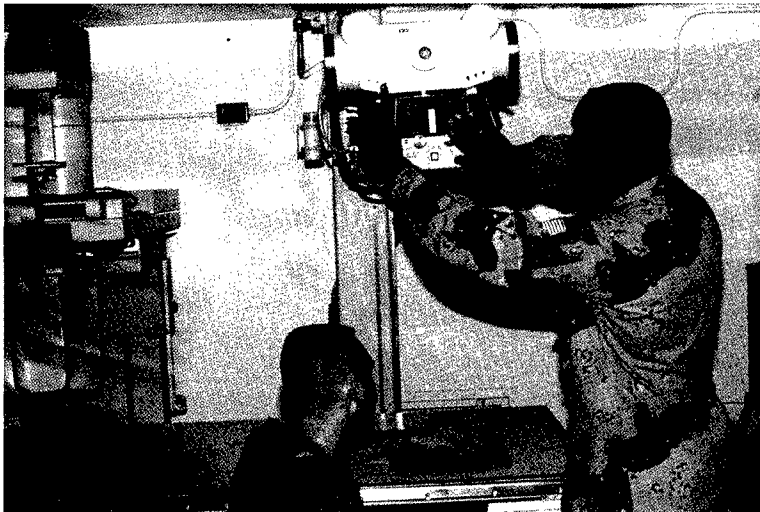
must coordinate with DLA as they develop redeployment plans and incorporate disposal support into these plans.

- **The Defense Logistics Agency Depots.**

As HSS planners develop plans for redeployment of medical units, they must also take into consideration possible **turn-in of excess equipment and return of medical assemblages** to DLA depots. Procedures for these actions must be coordinated with the DLA liaison personnel in the theater or referred for action to the DLA.

### 5. Service Responsibility

**As an operation nears completion, medical materiel is often both on-requisition and en route in the distribution system.** The Services will continue to require supplies, but some categories will not be required in the quantity that was requisitioned. **The logistics officer, in coordination with the JFS, the DLA, and the Services, determines when the supply pipeline can be shut down.** The Services are responsible for reconstitution of their



*In postconflict environments, logistics plans must accommodate redeployment of medical equipment.*

## HEALTH SERVICE SUPPORT IN KOREA

At Hagaru-ri, when the casualties started to flow from north and south, C and E Medical Companies (with a listed bed capacity of 60 each) expanded their facilities over and over again. C Company, for instance . . . treated 400 patients simultaneously; E Company handled 600 patients at one time.

SOURCE: After Action Report  
1st Marine Medical Battalion In North Korea  
November 1950

Service elements used in the operation. **The procedures for redeployment from the SIMLM are as follows:**

a. **US Army Redeployment.** Commanders and planners must **plan and execute redeployment in an efficient manner** that facilitates the use of redeploying units, individuals, and materiel to meet new crises. **Unit integrity should be maintained** to the maximum extent possible. By doing so, units can be diverted anywhere, ready to continue the HSS mission. The focus of individual manpower and materiel redeployment is **total accountability and efficient handling of all HSS equipment and medical materiel**. The desired end state after redeployment is the restoration of the Army's capability to conduct future operations.

- In order to conduct an effective and efficient redeployment operation, **specific units, individuals, and equipment and supplies must be identified and allocated** to the operation. The CINC must identify a structure to support the redeployment operation.
- **Medical care, life support, and other services**, as well as supplies and materiel, must be provided.
- The redeploying command uses **ad hoc port support teams** provided by the moving units to finalize the preparation

and loading of vehicles and equipment for shipment.

- Maintaining **unit integrity** during redeployment is as critical to readiness as it is during deployment. When possible, **containerized unit equipment** will be shipped with the unit's non-containerized cargo. This requires in-transit visibility of the cargo to facilitate diversion en route, if required.

b. **USAF Redeployment**

- **Pre-positioned assets** (CHs, mobile aeromedical staging facility, aeromedical staging facilities, blood donor centers [BDCs], and blood transshipment centers [BTCs]) **are normally reconstituted "in-place" unless they are being deactivated**. A complete inventory is conducted, table of allowances are validated, and appropriate records adjusted. Quality assurance data is collected and recorded. Requirements are identified "up-channel" for funding if necessary. Items not in an applicable table of allowance are segregated and reported as excess. **This work is normally accomplished prior to redeployment of personnel** to their home stations.
- **Mobility assets** (ATHs, air transportable clinics, and transportable blood transshipment centers [TBTCs]) **are normally redeployed to their home**

---

## Redeployment of Health Service Logistics in Postconflict Environments

---

**base** after a complete inventory and collection of quality assurance data. Assets could also be shipped to AFMLO and/or operating location-2 for refurbishment. If deployed with MOMEDLOG and a stock record account number, all appropriate transactions (including table of allowance validation) can be processed on site. **Excess materiel may be transported to the home station** for final disposition or transferred to the SIMLM or other authorized activities in the AOR, as directed by higher headquarters. The mode of shipment for redeployment determines packing methods. Normally, 463L pallets are used for airlift, and seavans for sealift. Coordination with the supporting transportation activity is required. After the ATH is received at the home base, requirements are identified for funding to support reconstitution.

c. **USN Redeployment.** Upon receipt of deactivation orders, Navy MTFs **discontinue accepting patients** and begin to arrange for **evacuation of patients** to an appropriate facility that can best treat their injuries. Fleet hospitals will normally be redeployed to a CONUS location for reconstitution after a conflict. A thorough **identification** together with appropriate **packing, labeling, blocking, and bracing** of all appropriate materiel into International Organization for Standardization containers is required. All

materiel will not be returned to CONUS. In making decisions as to what items to retain, it is imperative to consider the total cost of an item that must be shipped, refurbished, repackaged, and redeployed. **Assistance teams will be deployed in theater** to facilitate the deactivation of the hospital and to work with the hospital staff in providing for an orderly redeployment of hospital assets.

d. **USMC Redeployment.** Upon conclusion of the operation, **the MEDLOGCO commanding officer, through the chain of command, will request cancellation of outstanding and/or open requisitions** through the SIMLM. Excess medical materiel which is on hand or in-transit will be evaluated to ensure the most efficient and effective redistribution plan is enacted. **Existing excesses should be reported** to the in-theater Defense Reutilization Marketing Office; consideration should be given to cross-leveling medical materiel items with other medical elements experiencing shortfalls. **Medical materiel** which was deployed into the theater of operations by a MEDLOGCO and medical and dental battalions will be retrograded using the same procedures. **Maritime pre-positioning ships'** assets which were off-loaded and used will be returned to the maritime pre-positioning force program. All remaining expired and nonfunctional medical materiel will be disposed of in accordance with local laws and DOD directives.

Intentionally Blank

## CHAPTER V

### HEALTH SERVICE LOGISTICS SUPPORT IN MILITARY OPERATIONS OTHER THAN WAR

*"Generally, management of the many is the same as management of the few. It is a matter of organization."*

Sun Tzu, The Art of War  
400-320 BC

#### 1. Military Operations Other Than War

MOOTW encompass a wide range of activities where the military instrument of national power is used for purposes other than the large scale combat operations normally

associated with war. There are six joint principles which apply to MOOTW, and the medical commander and the health service logistics planner must use these principles to guide the planning and execution of the HSS mission. These principles are shown in Figure V-1 and discussed below.

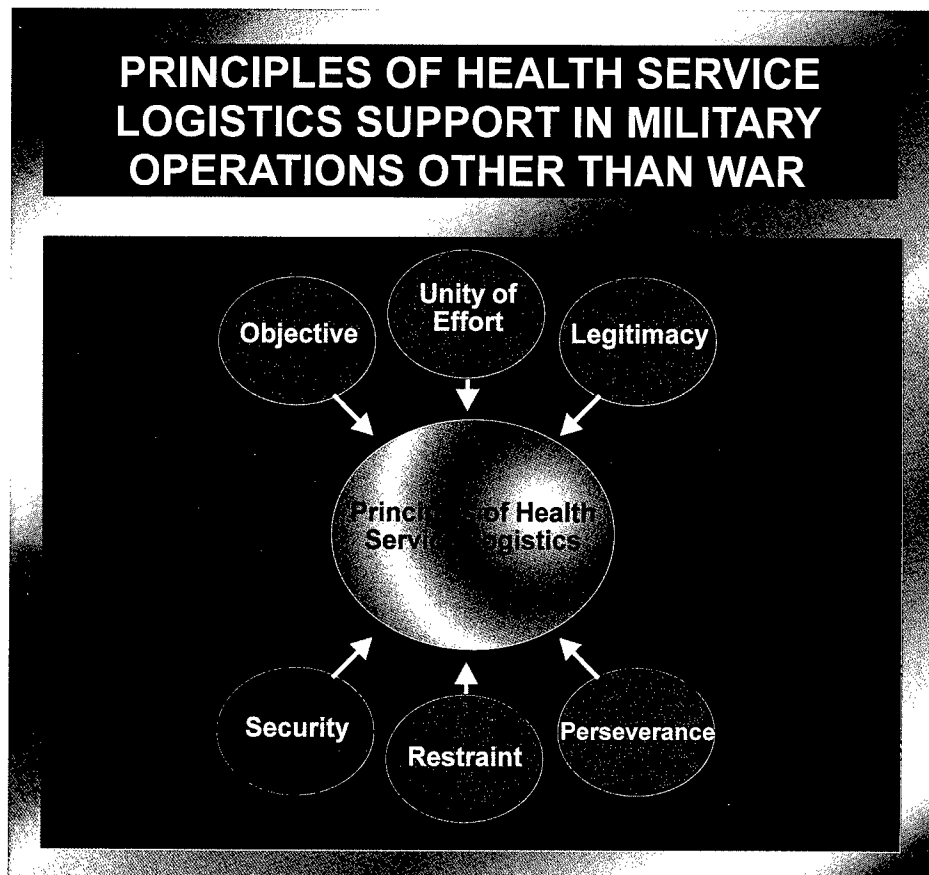


Figure V-1. Principles of Health Service Logistics Support in Military Operations Other Than War

## Chapter V

a. **Objective.** The HSS commander directs every HSS mission toward a **clearly defined, decisive, and attainable objective**. The military effort must be integrated into the total effort in achieving strategic aims and culminating in the desired end state. The joint health service logistics planner must understand the strategic, operational, and tactical aims, set appropriate objectives, and execute the HSLS mission in consonance with the HSS portion of the OPLAN.

b. **Unity of Effort.** The joint health service logistics planner must **seek unity of effort toward every objective**. This entails ensuring that close coordination is maintained with all Service participants in the HSLS arena, as well as other US agencies, allied and coalition forces, host nation (HN), nongovernmental organizations (NGOs), and religious groups. Health service logistics planning must address the military contribution to MOOTW initiatives that are political, economic, psychological, and military in nature.

c. **Legitimacy.** Legitimacy involves **sustaining the people's willingness to accept the right of the government to govern or of**

**a group or agency to make and carry out decisions.** For example, in nation assistance programs, HSS operations should not undermine the confidence people have in their nation's government. **HSS operations should complement, not detract from, the legitimate authority of the HN government.** US forces are also concerned with the legitimacy issue when involved with foreign interventions. Due to its acceptance by the civilian population, HSS can assist in mitigating the adverse impacts that other US military interventions may cause in a region.

d. **Perseverance.** In MOOTW, strategic goals may be accomplished by **long-term involvement, plans, and programs**. Short duration operations will occur, but these operations must also be viewed as to their impact on the long-term strategic goals. Therefore, HSS planners must prepare for the **measured, protracted application of military HSS** to support the desired end state.

e. **Restraint.** MOOTW **place constraints on the potential actions** that can be undertaken to achieve military objectives. **The rules of engagement (ROE)** governing these actions reflect those constraints.



*The health services logistics planner must ensure that adequate personnel and materiel are available to provide necessary health services.*

## Health Service Logistics Support in Military Operations Other Than War

Imprudent action outside of the ROE may, in fact, have a detrimental effect on the attainment of strategic goals and objectives. All forces participating in these types of operations must incorporate restraint and adherence to established ROE, laws, regulations, policies, and norms to ensure the furtherance of the mission accomplishment.

f. **Security.** The security of US forces abroad is paramount. Commanders and planners at all echelons must be aware of the ever present danger that can exist from various groups, factions, or other governments. Even in a peacetime environment, US forces can be targeted for terrorist activities. **Health service logistics planners must ensure they include force security measures** as well as security measures for safeguarding health service logistics materiel from contamination, destruction, or theft.

### 2. The Role of Joint Health Service Logistics

a. **Health service logistics plays a significant role in the delivery of health care in MOOTW.** As most MOOTW missions are conducted within an immature theater or under disaster conditions, the full complement of logistics capabilities and services may not be in place or may have been destroyed. **The health service logistics planner must be flexible and innovative** to be able to bridge the gap between the requirements generated by the operation and the capability to provide the necessary Class VIII materiel.

b. Each Service should deploy with an **adequate number of days' supply of health service materiel** to accomplish the mission until push package resupply or a line item requisition support is established.

c. To ensure that the correct mix of pharmaceuticals and equipment are available for the mission, the health service logistics

planner must maintain **close coordination with the clinicians.**

### 3. Operational Missions

HSLS can provide **traditional logistic support** to deployed forces or may be incorporated into OPLANs for **other types of operations shown in Figure V-2.**

a. Prior to a deployment on a **noncombatant evacuation operation (NEO)**, the senior medical person accompanying the force should be provided information by regional CINC or major Army command level personnel (such as a Country Team) to determine if there are any **special medical supply or equipment requirements.** These items could include pediatric or geriatric medicines and medical equipment, depending on the composition of the evacuees. **Under most circumstances, the Class VIII supplies and equipment the force brings with them is all that they will have** to sustain themselves and the evacuees. In a permissive NEO, it may be possible to obtain more medical supplies or equipment

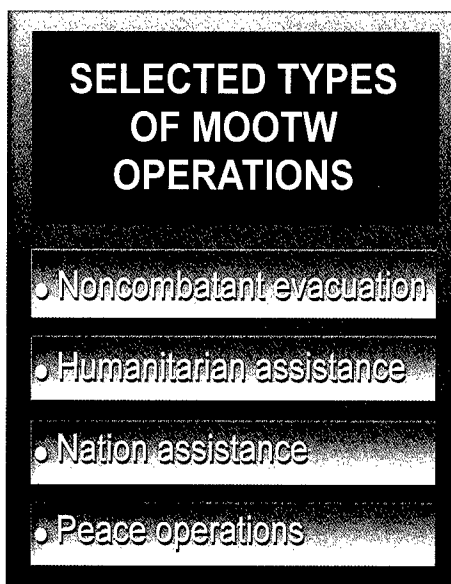


Figure V-2. Selected Types of MOOTW Operations



## Chapter V

---

locally; however, these supplies and equipment must meet stringent US requirements. Further, caution must be used when acquiring medical equipment locally, as the equipment may not be approved for use on USAF aircraft.

**b. In disaster relief operations, the management of Class VIII materiel is critical** to the successful completion of the mission.

- **An assessment of the disaster area** (to include coordination with other agencies or countries providing assistance) **must be accomplished** to determine how many victims requiring assistance there are and what types and quantities of supplies and equipment are required and whether the materiel is currently available or anticipated to be donated.
- **The JTF commander may task-organize an HSLS element** to provide for the management, receipt, sorting, storage, repackaging, distribution, and accounting for donated medical supplies and equipment. This task-organized element would further be responsible for the requisition, receipt, and accountability of Class VIII resources which are required but cannot be met through donated materiel.

c. In **humanitarian assistance operations**, the health service logistics planner must **obtain and coordinate transportation and receive, sort, store, and distribute Class VIII materiel**. Depending upon the scope of the operation, there may also be donated medical supplies which must be handled, stored, repackaged, and distributed. Due to the remote locations of many humanitarian assistance missions, transportation of medical personnel and medical materiel is critical to the successful completion of the missions.

d. In **nation assistance operations**, health service logistics personnel can **assist an HN by conducting an assessment of the military or civilian medical supply infrastructure and industry**. In many countries, a formal health service logistics system does not exist or is rudimentary in nature. Health service logistics personnel can provide an analysis, assist in establishing a system, and provide training in materiel handling, storage, and distribution techniques.

e. In **peace operations, the HSLS mission is more the traditional support to a deployed force**. Due to the austere staffing and troop ceilings placed on many of these missions, the health service logistics element may be restricted in size. Other than the strategic delivery of materiel, the functions of receiving, storing, accounting for, requisitioning, repackaging, optical fabrication, and managing blood and blood products may be accomplished in another country or safe haven.

### 4. Domestic Support

Throughout the history of the United States, **military personnel have been called upon to provide assistance to federal, state, and local governments** during times of need. This assistance can take the form of disaster relief as occurred following Hurricane Andrew in 1992, community assistance, environmental assistance, and law enforcement support. Because the laws governing military assistance to state and local governments and agencies are complex, the commander receiving the request for assistance should review it cautiously and obtain an opinion from the support staff judge advocate.

a. **Humanitarian assistance includes those disaster and civil defense activities, functions, and missions in which the Department of Defense has legal authority**

---

## Health Service Logistics Support in Military Operations Other Than War

---

**to act.** The Department of Defense provides disaster assistance to states, the District of Columbia, and US territories and possessions. Assistance is based upon requests from civil authorities and usually as a result of **natural or manmade disasters**, such as hurricanes, earthquakes, or massive explosions. Public Law 93-288 (as amended) is the authority for the Federal Response Plan. The emergency support function (ESF) #8 is the Health and Medical Services Annex of the Federal Response Plan. The purpose of this function is to provide US Government assistance to supplement state and local resources in response to public health and medical care needs following a significant natural disaster or manmade event. The assistance provided under ESF #8 is directed by the Department of Health and Human Services (DHHS) through its executive agent, the Assistant Secretary for Health.

- In **civil emergencies**, the principal interface for the Department of Defense will be with the Federal Emergency Management Agency, the DHHS regional coordinators, and the state's medical and health coordinators.
- At the onset of the operation, **criteria for eligibility** for care must be established, an **assessment** of the assistance needed must be conducted, the **duration** of the operation must be estimated, and the **end state** of transitioning control back to the civil authority planned. In the HSLS arena, a determination must be made of what supplies and services are reimbursable and what governmental agency or organization is responsible for this reimbursement.
- Depending on the magnitude of the disaster, the local civilian hospitals and other medical resources may be overwhelmed. **In the event the community's medical infrastructure is not sufficient to handle the emergency,**

**the NDMS may be activated.** The NDMS is a nationwide network of over 100,000 nonfederal acute care hospital beds. Other in-place resources to execute relief operations include communications networks, transportation systems, and medical regulating systems. The **national medical mutual aid response network** provides disaster medical assistance teams, available military medical units, and supplementary medical supplies and equipment.

b. **HSLS to the other categories of domestic support are limited.** Support would normally be only that which is required for the deployed military personnel participating in the operation.

c. Refer to Joint Pub 3-07.7, "Joint Tactics, Techniques, and Procedures for Domestic Support Operations," for an in-depth discussion of domestic support operations.

### 5. Funding

A significantly important aspect of conducting MOOTW missions is the funding mechanism for the operation. **Funding can come from a variety of sources**, such as internal DOD sources, funds approved by Congress for a specific operation, other US governmental agencies, international governments or organizations, and NGOs (to include charitable and religious groups). The health service logistics planner must ensure that he is **knowledgeable of the funding and reimbursement mechanisms** of the specific mission before obligating funds for health service materiel purposes.

### 6. Planning Considerations

See Figure V-3.

**Planning for MOOTW uses the same planning process as that of any military operation.** The health service logistics

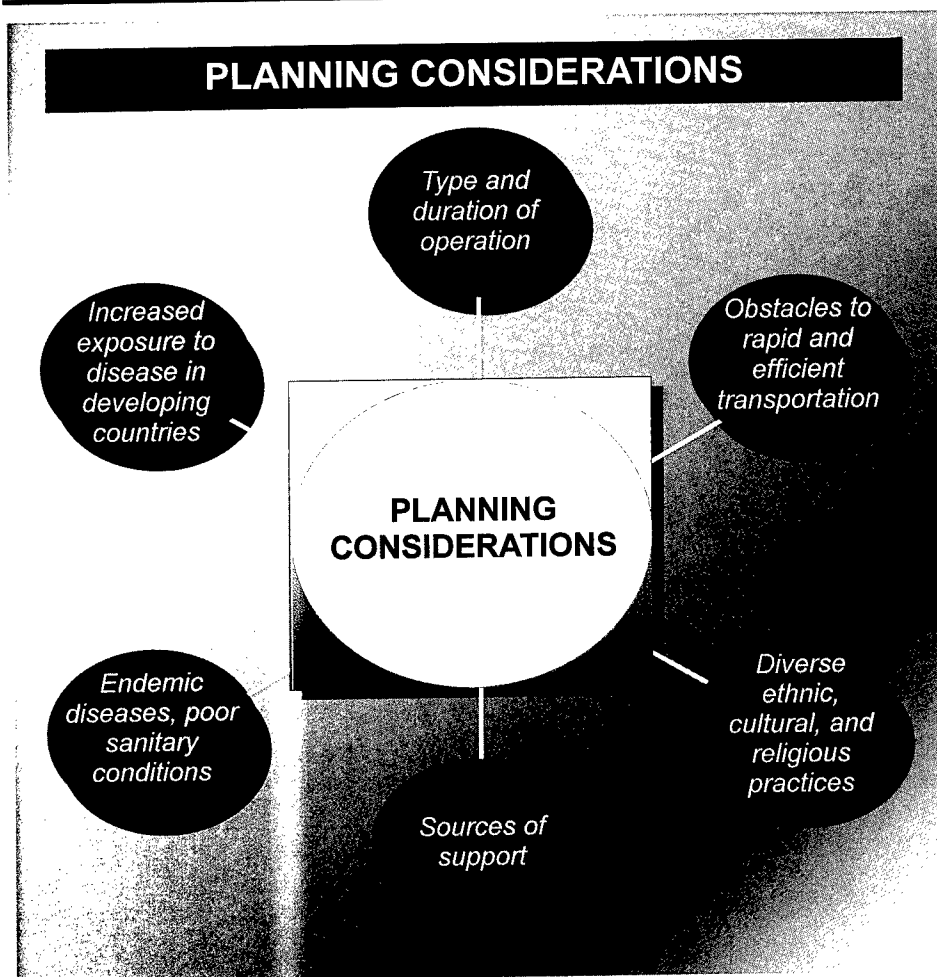


Figure V-3. Planning Considerations

planner, however, must use **innovative thinking** and incorporate **flexibility** into the HSLs plan to ensure responsive support in a challenging and possibly novel environment.

a. The **type and duration of the operation** will influence the composition of the health service logistics element, the types and quantities of medical materiel required, and the level of development of the HSLs system facilities. Further, **troop ceiling limitations** may also restrict the number of HSLs personnel in the operational area.

b. In many developing countries, **obstacles to rapid and efficient**

**transportation may present unrecognized challenges.** The HSLs planner must consider existence and capabilities of port facilities (such as depth of the harbor, availability of materials handling equipment, or refrigerated storage capabilities) and the state of development of the country's road network. **Many developing countries do not have extensive improved roadways** and, as the operation moves away from populated areas, **the road networks deteriorate or cease to exist.** In humanitarian assistance and disaster relief operations, it often requires **nontraditional approaches** to maintain a continuous flow of medical materiel into isolated areas.

---

## Health Service Logistics Support in Military Operations Other Than War

---

- c. Due to the prevalence of endemic diseases, poor sanitary conditions, and increased exposure to disease in developing countries, **HSLS must closely coordinate with medical treatment elements** to ensure that appropriate quantities and types of medicines needed to counter the threat are available.
- d. **Diverse ethnic, cultural, and religious practices challenge the HSLS planner** to be cognizant of the sensibilities of the population supported in the health service logistics area.
- e. **Other sources of support should be considered by the HSLS planner.** This support may come from the **other federal agencies, allied or coalition forces, or the HN.** Due to stringent federal regulations concerning drug standards and the highly sophisticated technology of medical equipment, the availability of this type of support may be limited.

## Chapter V

---

Intentionally Blank

## CHAPTER VI BLOOD MANAGEMENT

*"Blood is the price of victory."*

**Clausewitz  
On War, 1832**

### SECTION A. THE ARMED SERVICES BLOOD PROGRAM

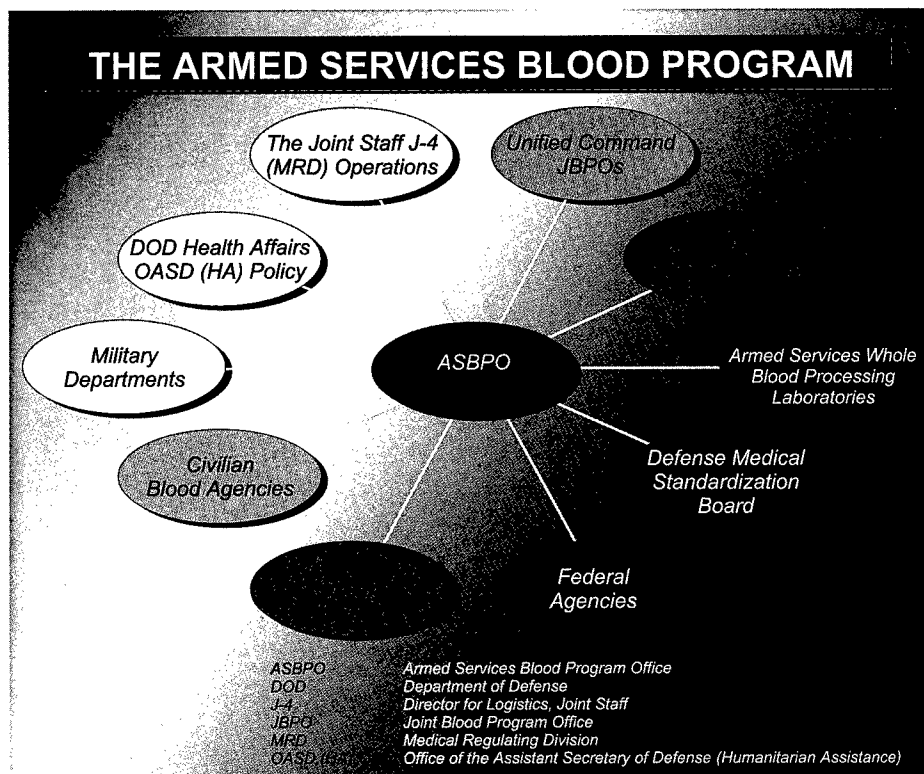
#### 1. General

Established by the ASD (HA), the **Armed Services Blood Program (ASBP)** provides transfusion products when required to US forces worldwide. Tri-Service cooperative efforts between the US Army, Navy, and Air Force enable blood and blood products to be collected, tested, processed, and shipped to

military MTFs throughout the world. **The planning and execution for the effective management of blood and blood products is a continuing, dynamic process** requiring a coordinated, highly responsive system that extends from CONUS to the battlefield. The various aspects of this coordination are depicted in Figure VI-1.

#### 2. Armed Services Blood Program Office

The Armed Services Blood Program Office (ASBPO) (Figure VI-2) is chartered by the



**Figure VI-1. The Armed Services Blood Program**

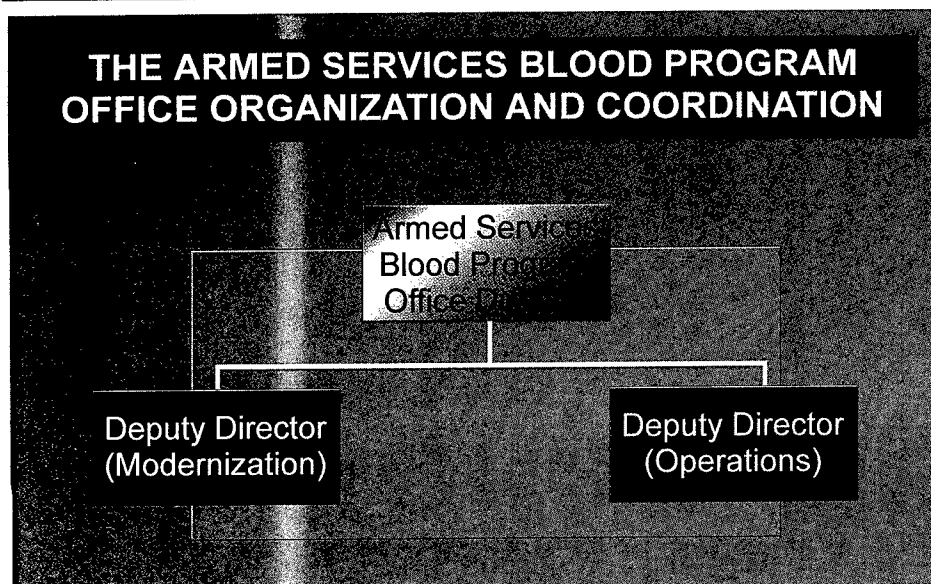


Figure VI-2. The Armed Services Blood Program Office Organization and Coordination

Department of Defense to **coordinate the provision of blood products throughout the Services to meet medical requirements during national emergencies and overseas military operations.** The ASD (HA) will provide overall policy guidance in blood program matters.

These programs shall adhere to ASD (HA) policies, and meet the Food and Drug Administration (FDA) regulations published in the Code of Federal Regulations and Army Field Manual 8-70, NAVMED P-5120, AFI 160-11, and follow the procedures of the American Association of Blood Banks (AABB) as established in Army Technical Manual 8-227-3, NAVMED P-5101, AFM 160-50. **The Chairman of the Joint Chiefs of Staff reviews and provides guidance on all matters pertaining to blood support in joint operation planning and execution as well as activation of the ASBPO in contingency and war.** The ASBPO coordinates implementation of the ASD (HA) policies and DOD procedures for the ASBP. The ASBPO is under the policy guidance of the ASD (HA). **The ASBPO:**

a. Coordinates and monitors the **blood programs** of the US Army, Navy, and Air Force and that of each geographic combatant command.

b. Coordinates **standardization of policies** through the ASD (HA) for the collection of blood and the operation of the Services' blood programs.

c. Coordinates the development and submission of **specifications on the essential characteristics** of required blood program equipment to the DMSB.

d. **Performs liaison** with other federal, civilian, and allied and coalition agencies concerning blood-related matters. The Secretary of the Army shall provide appropriate support personnel, facility, and budgetary resources as required to ensure that the responsibilities of the ASBPO can be properly discharged.

e. Directs the Services, upon mobilization or during periods of increased blood needs for contingency operations, to meet **required**

quotas of blood or blood products to be shipped to designated Armed Services Whole Blood Processing Laboratories (ASWBPLs).

### 3. Service Blood Programs

The US Army, USN, and USAF maintain separate blood programs to meet normal peacetime requirements. To meet ASBP contingency requirements, the Services direct expansion of their BDCs to rapidly expand their blood collecting capabilities. Additional responsibilities of the Services with regard to the ASBP are described in DOD Directive 6000.12, "Health Services Operations and Readiness," and DODI 6480.4, "Armed Services Blood Program (ASBP) Operational Procedures."



*Efficient blood management and distribution often is the difference between life and death in the field.*

### 4. Geographic Combatant Commands

Each geographic combatant command maintains a separate integrated system for providing blood products to the various Service components' MTFs within the CINC's AOR. The geographic combatant command Joint Blood Program Office (JBPO) serves as the overall blood manager within each command. In support of geographic command OPLANs, the ASBPO establishes shipment requirements for liquid and frozen blood products from CONUS ASWBPLs to the respective geographic commands. Frozen blood products can be pre-positioned in designated geographic combatant commands to augment blood requirements during the initial days of an armed conflict.

a. **Joint Blood Program Office.** The JBPO is under the staff supervision of the combatant command surgeon. This office is responsible for the joint blood program management in the theater of operations. The organization of the JBPO depends on the overall command mission. Personnel are assigned from all Service components as necessary to meet the blood operational requirements. **The JBPO:**

- **Advises the geographic combatant commander** on all matters pertaining to theater blood management activities. This shall include the development of the concept of operations for the blood program and the writing of the supporting OPLANs using command mobilization planning factors. Mobilization planning factors will include the establishment and coordination of Area Joint Blood Program Office (AJBPOs) as necessary.
- **Ensures ASBP policies are followed** by evaluating BDCs and Blood Product Depots (BPDs) to ensure compliance with policies, standards, and regulations



## Chapter VI

of the ASBPO, the FDA, and the AABB.

- **Provides managerial and technical oversight** of all DOD military blood activities within the AOR, to include the coordination of Service component blood programs, blood product requirements, and capabilities within the theater of operations.

- **Maintains direct liaison** with the ASBPO.

- **Plans and executes Joint Blood Program exercises.**

- **Evaluates the AJBPO, BDC, BPD, BTC, and blood supply units (BSUs)** to ensure that personnel, equipment, and resource requirements are addressed in the geographic combatant command OPLANs.

### b. **Area Joint Blood Program Office.**

The combatant command surgeon may direct the establishment of AJBPO **to provide regional blood management in the theater.** The AJBPO may be established upon activation of a JTF as outlined in the respective OPLAN or operation order. **The functions of an AJBPO are similar to a JBPO, but in a limited geographical area.** The AJBPO:

- **Coordinates blood requirements and distribution of blood and blood products** to support all the BSUs and MTFs in the AJBPO area regardless of Service component. This includes defining the distribution system for blood and blood products at all echelons, from the supporting BTC or BSU down to the MTF.
- **Evaluates BDC, BPD, BTCs, BSU, and MTF transfusion services within the operational area** to ensure the requirements of the JBPO are supported or

addressed in the geographic combatant command and/or JTF OPLAN.

## SECTION B. BLOOD SUPPORT IN THE CONTINUUM OF CARE

### 5. Blood Distribution System

Blood and blood products are more than just another commodity of medical supply. Blood is a live tissue and, as such, **requires handling by individuals specially trained in blood movement and storage.**

a. Blood support in a theater of operations containing actual combat operations is a **dynamic and ever-evolving process**, heavily influenced by:

- Stringent storage and handling requirements.
- Inventory management constraints.
- Limited potency periods.
- Available technology.

b. To be successful, **blood support must be an organized and cooperative effort** on the part of health service logisticians, laboratory and blood bank personnel, transportation personnel, and primary health care providers.

c. **Theater blood support during wartime is provided to US military facilities** and, as directed, allied and coalition military and indigenous civilian medical facilities. Service components under the geographic combatant commands maintain individual peacetime blood programs to meet their individual needs. These programs interface with CONUS blood bank services and receive blood components directly from established DOD joint programs.

---

## Blood Management

---

d. **Theater blood support may consist of a combination of liquid and frozen blood components.** The actual ratio of liquid to frozen blood components is determined by the urgency of need and availability of resources within the theater of operations to handle frozen blood.

e. **Blood services in a theater of operations containing actual combat operations consist of a combination of operational capabilities.** Of importance are the following:

- Receiving blood components from the supporting base.
- Moving, storing, and distributing blood components to primary users.
- Storing, processing, and distributing previously frozen blood components pre-positioned within the theater.
- Collecting and processing blood in the theater of operations. (This may be accomplished on a routine or an emergency basis depending on the combat intensity.)

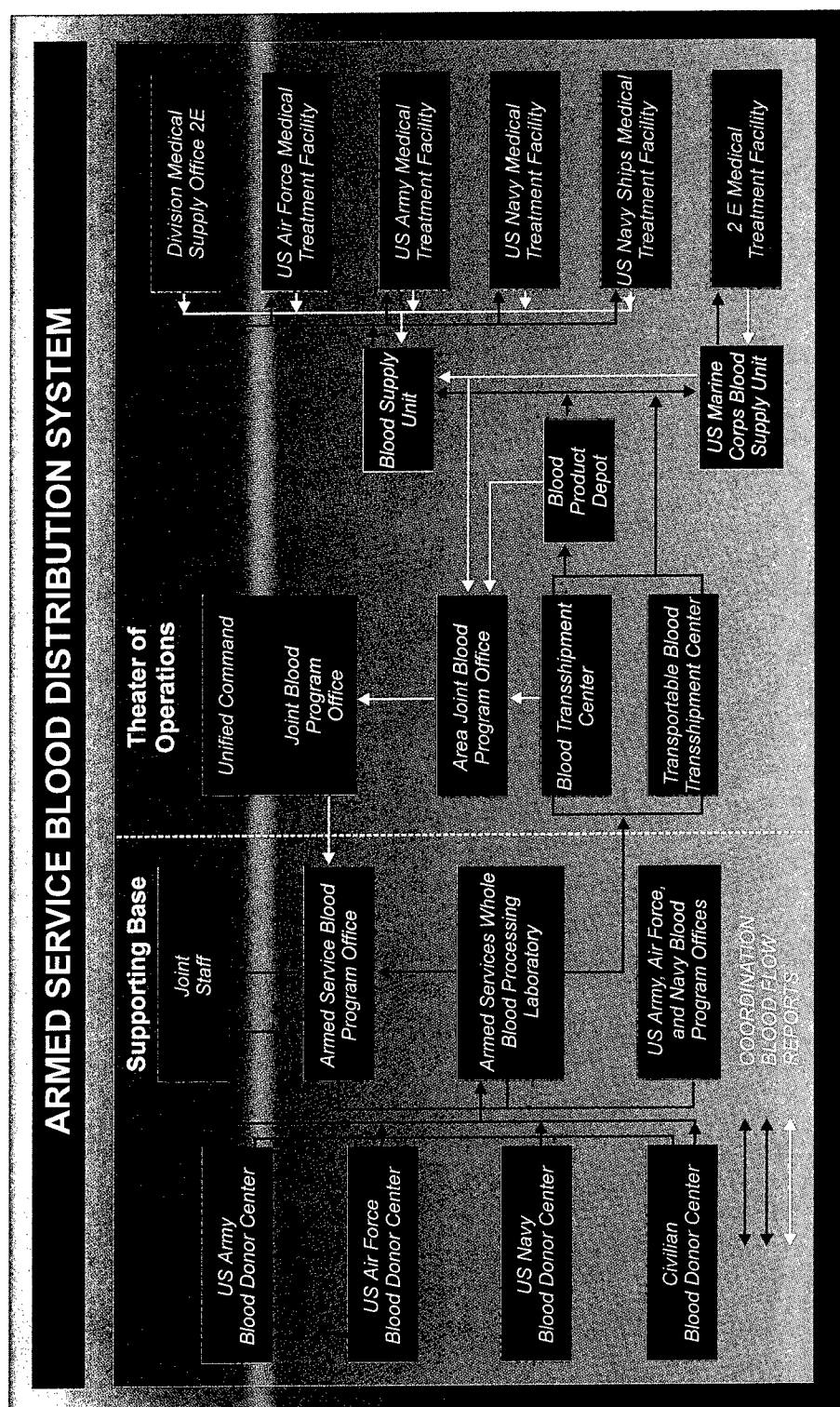
f. **The Armed Services Blood Distribution System** from the supporting base to the MTF is depicted in Figure VI-3. **A JBPO or an AJBPO will be responsible for the Joint Blood Distribution System within their geographic area.** The JBPO works for the geographic combatant command surgeon. The AJBPO, when formed, may work for the JTF surgeon of a subordinate JTF or for a component command surgeon. The AJBPO mission is based on a geographic area as well as a specific command. Therefore, **AJBPO shall plan and train for joint operations and shall coordinate with the JBPO for all blood operations.** Geographic combatant command, subunified command and JTF OPLANs will include projected blood requirements developed by JOPES.

These requirements are documented in Appendix 2 of Annex Q, "Medical Services to the Unified Command" OPLAN as prescribed in CJCSM 3122.03, "Joint Operation Planning and Execution System, Vol II: (Planning Formats and Guidance)."

g. **MTFs will:**

- **Maintain an amount of blood products on hand** necessary to meet operational requirements, yet **minimize waste** due to out-dating. **MTFs have the capability to collect blood in emergencies.** This practice is not encouraged, however, since the MTF does not have the capability to perform serological testing of these units for infectious diseases. A sample of serum must be kept of all emergency donations for retrospective testing purposes. In addition, the attending physician must certify in writing that the use of blood not fully tested is required to sustain the life of the patient.
- **Submit a daily blood report (BLDREP)** (Appendix B, "Blood Management") **to their supporting BSU**, as designated by the JBPO or AJBPO. This BSU may be from any Service component. In certain joint operations, such as small contingency operations or in MOOTW, MTFs may deploy with blood if a requirement to use blood prior to establishment of the resupply chain is anticipated. In this case, the ASBPO should be notified to coordinate the provision of the necessary blood products.

h. **A BSU can usually support a maximum of 12 MTFs** depending on the situation, and may include forces afloat. The mission of the BSU is to collect blood on an emergency basis and receive, perform limited testing, store, process, and distribute blood products to its supported MTFs. **A BSU:**



**Figure VI-3. Armed Services Blood Distribution System**

---

## Blood Management

---

- Is responsible for maintaining a minimum of a 5-day supply of blood products based on MTF BLDREP requirements.
- Is deployable with blood products when the operation involves immediate conflict.
- Is tailored to force packages for contingency operations.
- Can be tasked by the geographic combatant commander to manage a BPD.
- Can be tasked by the senior medical authority to collect, process, store, and distribute platelets within a theater.
- Can provide a consolidated BLDREP (from its MTFs) to the AJBPO.
- Act as a BSU and distribute blood and blood products to MTFs.
- Provides daily BLDREP to their respective AJBPO or JBPO, when operational.
- Geographic combatant commands are responsible for ensuring that **BPDs are maintained, manned, equipped, and supplied during peacetime operation.**

### i. The BPDs have been built into geographic combatant commands to provide storage for frozen RBCs and FFP.

(Frozen platelets have not been licensed by the FDA. Once this product is licensed, it may also be stored in BPDs.)

#### • Blood product depots:

- Are needed to offset strategic shortages of blood products during the initial stages of an operation until the liquid RBC units can be shipped into the theater.

- Provide frozen blood products to ships offshore.

- Have the capabilities to distribute frozen products as well as to deglycerolize frozen RBCs.

- Issue blood and blood products to BSUs, as required.

j. **The BTCs and TBTCs are managed by the USAF at primary airfields within the operational area.** They receive blood products from the ASWBPL, store them, and re-ice and distribute them to BSUs or MTFs when required. They provide daily BLDREPs to their respective AJBPO or JBPO. The TBTCs may be airlifted to designated airports or landing zones to maximize blood distribution and to provide for BTC operations not otherwise available in the theater.

**NOTE:** Assets to meet anticipated EPW, civilian, and valid allied or coalition personnel workload must be included in the TPFDD as documented in accordance with CJCSM 3122.03, "Joint Operation Planning and Execution System, Vol II: (Planning Formats and Guidance)." Additionally, a 5-day safety factor will normally be added to the blood requirements in combat zone, operations zone I to take into account LOCs disruption, damage, and in-transit spoilage.

## 6. Available Blood Products By Echelon

Figure VI-4 provides a summary of the blood products now available to the theater, as well as the echelon at which they are provided.

a. The storage temperature for **liquid RBCs** is 1 to 6° Centigrade (C).

BLOOD PRODUCTS (CLASS VIIIb) AVAILABLE TO THE THEATER							
PRODUCT	UNIT OF ISSUE	SHELF LIFE FOR STORAGE	ECHELON AVAILABILITY	DISTRIBUTION			
				O	A	B	AB
RBCs	APPROX 250ml	35 DAYS (42 DAYS WITH ADSOL)	II III & IV	100% 50%	— 40%	— 10%	— —
FROZEN DEGLYCEROLIZED RBCs	APPROX 250ml	21 YEARS	III & IV	100%	—	—	—
FFP	APPROX 250ml	1 YEAR	III & IV	—	50%	25%	25%
PLATELET CONCENTRATE	APPROX 300ml	5 DAYS	III & IV	50%	50%	—	—
LEGEND: APPROX-APPROXIMATELY ml-MILLILITERS							

Figure VI-4. Blood Products (Class VIIIb) Available to the Theater

b. The storage temperature for **frozen RBCs** is -65°C or colder. Once frozen blood has been deglycerolized, it can be stored up to 3 days at 1-6°C prior to transfusion.

c. **Fresh frozen plasma** is stored at -18°C or colder. Once FFP is thawed, it must be transfused within 24 hours.

d. **Platelet concentrates** are normally kept at room temperature, 20-24°C.

e. **Frozen blood shelf life** has been licensed by the FDA for 10 years and 24 hours post thaw. However, the DMSB allows for 21 years/3 days post thaw for wartime requirements.

## 7. Blood Transfusion Practice By Echelon

Figure VI-5 provides the blood products available by echelon as well as the blood typing system (ABO) and Rhesus (Rh) factor group for each echelon.

## SECTION C. PLANNING FOR EFFECTIVE BLOOD MANAGEMENT

### 8. Coordination

**Continuous planning for mobilization and other contingencies** enables the Services to rapidly respond to situations requiring blood support.

BLOOD TRANSFUSION PRACTICES BY ECHELON					
ECHELON	BLOOD PRODUCT	ABO & Rh GROUP	TRANS-FUSION SERVICE	STORAGE CAPACITY	BLOOD RESUPPLY
I	NONE	—	—	—	—
II	RBCs Rh+-	O	ABO GROUP DONOR RBCs**	50 UNITS PER MED FLD REFRIG- ERATION	III BLOOD SUPPLY UNITS (BSU)
III D304(1)*	RBCs Rh+-	O,A,B	ABO & Rh	480 UNITS LIQUID	III BSU
			MAJOR SIDE CROSS- MATCH (IS)		
III D304(2)*	RBCs	O,A,B Rh+-	SAME AS D304	475 UNITS FZ 480 UNITS LQ	III BSU
	FRESH FROZEN PLASMA (FFP)	A,B,AB Rh+-	NONE	20 UNITS	III BSU
	PLATELET CONCEN- TRATE (AS NEEDED)	O,A Rh+-	NONE	5 UNITS	III BSU UNITS
IV	SAME AS D404	SAME AS D404	SAME AS D404	SAME AS D404	IV BSU
<p>*CAPABILITY TO COLLECT AND PERFORM THE ABO AND Rh GROUP DETERMINATION ON 180 UNITS OF WHOLE BLOOD FOR EXTREME EMERGENCIES.</p> <p>**NOT NECESSARY IF ASWBPL HAS VERIFIED THE ABO GROUP.</p> <p>NOTE: (1 )D304 IS A LIQUID-ONLY DEPMEDS MODULE.</p> <p>(2) D404 IS A HYBRID LIQUID-FROZEN DEPMEDS MODULE.</p>					

Figure VI-5. Blood Transfusion Practices by Echelon

## Chapter VI

a. A coordinated effort between the theater JBPO and the theater operations officer and plans officer is required for successful planning. Operation plans dictate blood management strategy. Some issues include:

- Will blood be required immediately upon arrival of the combat units?
- Should blood be brought into the AOR with the initial medical units?
- Will there be multinational operations and will the JBPO be responsible for blood requirements of multinational forces?
- Do the storage capabilities of the BTCs and/or TBTCs, BSUs, and BPDs support the blood product requirements?
- Will BPD and/or MTF capabilities to deglycerolize frozen RBCs meet blood requirements prior to shipments of liquid RBCs from the supporting base?
- Are transportation assets readily available for emergency blood product distribution?
- Where will the air terminals be located?

b. **Location of BTCs is dependent upon the location of air terminals and operational necessity.** Blood storage capability at a BTC is usually 3,600 to 7,200 units. With additional personnel and equipment, this may be expanded to meet overall command requirements. BTC personnel must have knowledge of the available Army blood bank platoons, BSUs, and the types and locations of the MTFs in the combat zone for proper planning.

c. **Timely communication** with the next higher echelon of support usually ensures that adequate supplies of blood and blood products are available.

## 9. Blood Planning

a. **Product Availability.** Liquid RBCs and FFP are available for use. Frozen platelet concentrates are not yet available, and it is difficult to provide liquid platelet concentrates to the AOR within the current 5 day dating period.

b. **Shipping Red Blood Cells.** Subject to availability, RBCs shipped from CONUS are packed with the unit group and type distributions as depicted in Figure VI-6.

c. **Blood Planning Factors.** Blood planning factors are **programmed in the medical planning module by the Joint Data Systems Support Center** and subsequently used by the respective combatant command medical planners to generate daily blood product requirements (Class VIIIb) for the theater of operations. Generally, 20 percent of all RBCs will be given at Echelon II, 60 percent at Echelon III, and 20 percent at Echelon IV.

### d. Blood Support to Rh Patients

• **Females. Transfusing Rh positive RBCs to Rh negative females at Echelon II facilities,** where blood grouping and typing capabilities are not available, **may result in future complications** if the female is of child-bearing age.

• **Males.** Although the impact of sensitization on males and the health care system is not as great, the procedural changes for transfusions at Echelon II will also help to reduce sensitization to Rh negative males.

e. **Total Blood Product Requirements.** Initial blood planning factors to determine the estimated total blood product requirements for the theater of operations as established in the geographic combatant commander's OPLAN are listed in Figure VI-7.

UNIT GROUP AND TYPE DISTRIBUTION	
BLOOD GROUP/TYPE	DISTRIBUTION
O Rh POSITIVE	40%
O Rh NEGATIVE	10%
A Rh POSITIVE	35%
A Rh NEGATIVE	5%
B Rh POSITIVE	8%
B Rh NEGATIVE	2%

Figure VI-6. Unit Group and Type Distribution

f. **Pre-positioned Frozen Blood Products.** Pre-positioned frozen blood products or blood shipped from CONUS will **reduce the requirements to collect blood in the operational environment. Capabilities to collect and process blood in the theater are limited**, but when required, may provide platelets. Theater collection capabilities exist at DEPMEDS-equipped Echelon III MTFs (180 units) and at certain BSUs, BPDs, and USN vessels. This capability is not meant to supply local needs. The health service logistics planner must realize that Echelon II and III facilities generally do not have the personnel, supplies, or equipment for extended donor operations or for serological testing for diseases such as human immunodeficiency virus, hepatitis, and syphilis.

g. **Armed Services Blood Program Office Reaction Time.** The reaction time of the ASBPO or other supporting JBPO must

be considered. Optimally, **receipt by the requesting command of blood or blood products for sustainment of operations should take no longer than 72 hours.** Within some Unified Commands, BPDs with pre-positioned frozen blood products have been constructed to provide blood products prior to the delay in receiving liquid blood products from CONUS. This is especially important in theaters where the command anticipates short notice or no notice of impending combat operations where large numbers of casualties can be expected. **Most MTFs should plan to keep a 3-day supply of blood and blood products on hand. Most BSUs should have a 5-day inventory goal. Realistically, a planner may expect a 4- to 5-day resupply response time from outside the theater dependent upon at least two factors:**

- Availability of air transportation.
- Location of the operational needs.

h. **Red Blood Cells Shelf Life.** Currently, the health service logistics planner can **expect RBCs to be at least 8- to 10-days old upon receipt.** Blood collected in CPDA-1 (an anticoagulant preservative solution) and stored at 1° to 6°C expires 35 days after collection. This leaves a maximum shelf life of 25 to 27 days for use within the theater. However, with use of an additive solution, the shelf life of the RBCs is extended 7 more days (or for a maximum shelf life of 42 days after collection).

i. **Needs for Intelligence.** Once located in the AOR, **it is necessary for the JBPO to maintain current information** on the combat situation and on the anticipated actions of friendly and enemy forces. The best sources of this information are the joint force intelligence officer and the operations officer. As required, **the health service logistics planner can anticipate increasing requirements** for the AOR as a whole, or he may reallocate resources within the AOR to



BLOOD COMPONENT PLANNING FACTORS	
RBC	4 UNITS FOR EACH WOUNDED IN ACTION (WIA) AND EACH NONBATTLE INJURY (NBI) CASUALTY INITIALLY ADMITTED TO A HOSPITAL
FFP	0.08 UNITS FOR EACH HOSPITALIZED WIA OR NBI
PLATELET CONCENTRATE	0.04 UNITS FOR EACH HOSPITALIZED WIA OR NBI

Figure VI-7. Blood Component Planning Factors

support specific operations. **A good reporting and inventory control system is crucial:**

- How much blood is in the command?
- Where is it concentrated?
- Is it where the “action” is?
- Should blood or blood components be relocated?

## 10. Host-Nation Support

a. **Host-Nation Blood Bank Support.** The health service logistics officer will contact the CINC’s staff to determine if there are existing bilateral agreements in place, and to evaluate if health service issues and/or requirements have been determined. Medical intelligence will provide additional information upon which to base a decision on the **comparability of HN blood with reference to required FDA level of blood testing and the willingness and ability of the HN to provide blood bank support.** This support could take the form of additional units of blood or RBCs, additional refrigerators in local hospitals or hotels, ice-making capability, or sources for dry ice to store FFP or frozen RBCs.

b. **Obtaining Alternative Ice Sources.** Blood bank units and MTFs, along with units involved primarily with the storage and shipment of blood and blood components, **must develop alternative sources for ice and refrigeration** in case of equipment failure. These alternative sources can include other military units in the area or HN sources.

## 11. Logistical Considerations of Blood Support

a. After the decision has been made on where to locate the blood banks and the concept of operations for blood support has been established, **plans must be coordinated to effect the timely distribution of blood and blood products throughout the theater of operations.** Prior planning must be accomplished with the joint movement center to establish procedures for the emergency movement of blood. Specific information required when shipping blood by air includes weight, number of units, and number of boxes.

b. After transportation requirements and priorities have been established, **planning consideration must be given to maintaining adequate levels of required supplies** for the planned operational scenario. If the Army is the dominant user, a MEDLOG battalion will

## Blood Management

---

usually be augmented to perform Class VIII management functions and assume the role of the SIMLM for the AOR. **The SIMLM will have liaison officers from supported Services to assist in coordinating logistics support requirements** during joint or combined operations. Examples of required supplies include:

- Blood bags with the appropriate anti-coagulant preservative solutions.
- ABO grouping and Rh typing antiserum.

- Test tubes.
- Blood shipping boxes.
- Plastic bags.
- Adequate supply of ice for maintenance of required blood temperature during transit.

### 12. Maximum Capacities for Blood Product Shipments

Figure VI-8 depicts the maximum capacities for blood product shipments.

**MAXIMUM CAPACITIES FOR BLOOD PRODUCT SHIPMENTS**

1. PALLET, 463L.

A. MISSION/CAPABILITIES.

(1) PROVIDES ONE STANDARD SIZE PALLET CAPABLE OF TRANSPORTING 54 BOXES CONTAINING A MAXIMUM OF 972 UNITS OF FROZEN RBCs.

(2) THE 463L STANDARD PALLET MEASURES 108 X 88 X 4 INCHES. THE MAXIMUM LOADED HEIGHT IS 96 INCHES AND MAXIMUM ALLOWABLE WEIGHT IS 8,000 POUNDS. A PALLET WITH CARGO NET WEIGHS 354 POUNDS.

B. CHARACTERISTICS OF LOADED PALLETS.

(1) A LOADED PALLET WITH 54 BOXES OF 18 UNITS EACH WEIGHS 4,350 POUNDS AND HAS A VOLUME OF 432 CUBIC FEET. BOXES ARE STACKED 3 WIDE X 6 LONG X 3 HIGH. TOTAL CAPACITY IS 3,600 UNITS OF RBCs.

(2) A LOADED PALLET WITH 120 BOXES OF FROZEN PLASMA WEIGHS 6,000 POUNDS AND HAS A VOLUME OF 360 CUBIC FEET. TOTAL CAPACITY IS 2,160 UNITS (IF FFP UNITS ARE PACKAGED INDIVIDUALLY) OR 4,320 UNITS (IF FFP UNITS ARE PACKAGED IN PAIRS).

(3) A LOADED PALLET WITH 120 BOXES OF FROZEN BLOOD WEIGHS 6,000 POUNDS AND HAS A VOLUME OF 360 CUBIC FEET. TOTAL CAPACITY IS 1,560 UNITS OF FROZEN BLOOD (13 UNITS PER BOX WITH DRY ICE). A NEW FROZEN BLOOD SHIPPING CONTAINER USING AN EUTECTIC LIQUID FOR FREEZING INSTEAD OF DRY ICE IS CURRENTLY UNDER DEVELOPMENT AND TESTING. ONCE IT IS STANDARDIZED, PALLET CHARACTERISTICS WILL BE PROVIDED.

2. INSULATED BLOOD SHIPPING CONTAINERS.

A. SPECIFICATIONS.

(1) NSN 8145-01-357-1551.

(2) EMPTY WEIGHT IS 56 POUNDS WITH 5 EUTECTICS.

(3) CUBIC FEET IS 8.0

(4) EXTERIOR DIMENSIONS—26 INCHES LONG X 17 INCHES WIDE X 32 INCHES HIGH.

B. CAPACITY: FROZEN RBC OR FFP; 18 UNITS, WEIGHT 18 POUNDS.

**Figure VI-8. Maximum Capacities for Blood Product Shipments**

## CHAPTER VII

### HEALTH SERVICE LOGISTICS SUPPORT IN MULTINATIONAL OPERATIONS

*"Even the bravest cannot fight beyond his strength."*

Homer, *The Iliad*

#### 1. Composition of Multinational Operations

a. Multinational operations occur when **two or more nations join their armed forces to accomplish a common objective**. These operations can occur in war and in MOOTW.

- **Alliances are the result of formal agreements** between two or more nations to accomplish broad, long-term objectives. The alliances normally adopt interoperability standards and procedures which are codified in standardization agreements. The North Atlantic Treaty Organization (NATO) is an example of an alliance.
- **Coalitions are ad hoc arrangements** between two or more nations for the accomplishment of a specific objective. Once the objective is accomplished, the coalition is disbanded.

b. Multinational operations must maintain a **unified effort** toward the common objective.

#### 2. Health Service Logistics Support Considerations

a. Logistics support in multinational operations presents **numerous challenges due to a variety of different policies, procedures, and practices**. Some of the problem areas that may be confronted are shown in Figure VII-1.

b. **Close coordination and continuous liaison with all parties to an alliance or**

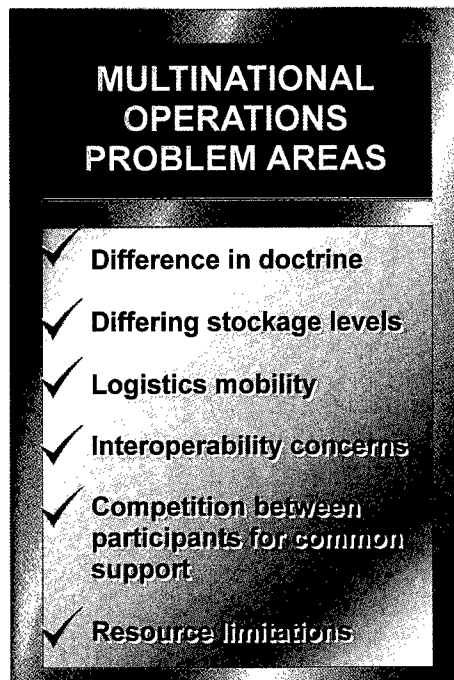


Figure VII-1. Multinational Operations Problem Areas

**coalition is the key to a successful operation.** This is especially true in the health service logistics arena. Each nation is responsible for providing HSS to its own forces unless an agreement defining a different arrangement has been reached. Usually, allied patients received at US MTFs are stabilized and evacuated to their own nations' facilities once their medical condition permits. In the functional area of health service logistics, **common medical items** which meet the specifications of all involved nations enhances the ability of the HSLS planner to cross-level medical materiel, alleviate shortages, and ensure continuous HSLS.

## Chapter VII

c. The NATO Standardization Agreements and the Quadripartite Standardization Agreements have provided a mechanism for standardizing medical materiel. These agreements describe the specifications for a number of medical items as well as describing echelons of care, markings on medical vehicles, patient classifications, and evacuation priorities. **Based on these agreements, the HSLS planner can better estimate the interoperability capabilities of the combined forces.** An example of this standardization is ensuring that all nations are using the same size litter so that it will fit into an evacuation vehicle from any party to the alliance.

d. **HSLS faces greater challenges in coalition operations** because standardization of medical materiel has not been accomplished over time. As with allied operations, each member nation is responsible for the provision of HSS to its own forces unless other arrangements have been formalized. In coalition operations, however, it may not be possible to cross-level medical materiel due to different specifications and quality of medical items.

### 3. Cultural Diversity and Language

In multinational operations, **significant differences in both language and customs** will exist between the various participants. **Each individual Service member must be sensitive to these differences** and to accommodate them when possible. Misunderstandings due to differences in languages can be mitigated by using translators. In the HSS arena, however, **it is critical for the health care provider to be able to understand what a patient is telling him.** To facilitate this process the multi-Service publication, “**Medical Service Multilingual Phrase Book**” (DA Pamphlet 40-3, Department of the Navy Medical Publication 5104, and Department of the Air Force Manual AFMAN 48-142) was developed for NATO operations. If the languages present in the AOR are not included in this publication, the JFS should develop a command publication for use by JTF health service personnel. This measure would enhance the ability of US health service personnel providing medical treatment and medical administration (to include HSLS) to allied or coalition forces.

#### HEALTH SERVICE SUPPORT IN KOREA

I drove on the ice and headed north catching inaccurate enemy rifle and machine gun fire as I went. Finally, after driving about three and a half miles, I spotted some men lying and crawling around on the frozen reservoir, and some crawling down the slope leading to the ice. These men had come from the convoy of wounded soldiers (31st and 32d Infantry and 57th Field Artillery) trying, as one said, ‘to get to Hagaru the best way we could.’... So I began bringing them down and sending them to the rear by jeep and sled. Later in the day Lieutenant Fred Van Brunt and a hospital corpsman joined my jeep driver, Private Ralph Milton, and me. Altogether we rescued over 300 soldiers from the 26 truck convoy. As long as we carried no weapons the Chinese held their fire...I noticed, however, that they had killed all the truck drivers. Their bodies were still slumped over their wheels.

SOURCE: Lieutenant Colonel Olin L. Beall  
Commander, Marine Motor Transport Battalion In North Korea  
1 December 1950

## APPENDIX A

### AEROMEDICAL SUPPORT EQUIPMENT AND SUPPLIES

#### 1. Aeromedical Evacuation Patient Support Equipment and Supplies

Patient support equipment and supplies for use aboard AE aircraft are contained in 3 general subcategories or kits as listed below:

a. Standardized AE In-flight Kits (Air Force TA 887) will remain with the assigned AE crews and will be managed separately within the AE system:

- Cardiac monitor and defibrillator
- 1 pulse oximeter
- 1 oxygen analyzer
- 3-4 continuous intermittent suction units
- Emergency supplies to include:
  - Tracheostomy tubes
  - Chest tube insertion kit
  - Laryngoscope and endotracheal tubes
  - Oral airways
  - AMBU bags
  - First line cardiac drugs (bicarbonate, epinephrine, lidocaine and bretylium)
  - Routine medical supplies (intravenous supplies, Foley Catheters, nasogastric tubes, reinforcement dressings)
  - Limited amounts of morphine and meperidine for emergency use only

• Heimlich valves

b. The following is the DMSB-approved list of AE PMIs. The quantities listed equal the initial PMI requirements contained in deployable modular kits called patient evacuation contingency kits (Air Force TA 887D)

NOMENCLATURE	QUANTITY
Ventilator	4
Pulse Oximeter	4
Oxygen Analyzer	4
Cardiac Monitor and Defibrillator	4
Vital Signs Monitor	4
Suction (Continuous or Intermittent)	8
Infusion Pump	4
Turning Frame	1
Locking Restraints	1
Spinal Board	10
Litter	30
IV Pole	30
Blankets	30
Litter Pads	30
Litter Straps	60
Traction Appliance	1

**Note:** Items not listed above will not be managed by the PMI return system and are the responsibility of the originating MTF.

2. The PMIs used in support of the AE mission must be AE-certified by Armstrong Laboratories, Brooks AFB, Texas, and the Aeromedical Evacuation Proponency, Ft. Rucker, Alabama, to ensure proper form, fit, and functionality for fixed- and rotary-wing military aircraft. Refer to USAFSAM-90-26, "Status Report on Medical Material Items Tested and Evaluated for Use in the USAF

---

## Appendix A

---

Aeromedical Evacuation System” and J/AFI 41-30 (draft) for detailed lists of certified equipment. An aeromedical certification label is required to designate AE certification for all PMI equipment. The DOD standard label must be affixed to each piece of AE certified equipment.

## APPENDIX B

### BLOOD MANAGEMENT

#### 1. Purpose of the Standardized Blood Reporting System

The purpose of the standardized blood reporting system is to effectively manage blood and blood products, project blood requirements, request blood, report blood inventories, and provide information on the overall blood element operations of all Service components in the theater of operations. The ASBPO has developed the contingency BLDREPs. Use of the Joint Message Text BLDREPs are mandated by CJCSM 6120.05, "Tactical Command and Control Planning Guidance and Procedures for Joint Operations - Joint Interface Operational Procedures (JIOP) Message Text Formats," CJCS 5725.04, "US Message Text Formatting Program," and CJCSM 6120.01, "Tactical Command and Control Planning Guidance and Procedures for Joint Operations - Joint Interface Operational Procedures (JIOP) Planning Guidance." The two standard joint message text format reports used to report contingency blood program operations are the BLDREP and the blood shipment report (BLDSHIPREP).

#### 2. Use of the Blood Report

The BLDREP provides a standardized message format that is used to report blood inventories, request blood, and project requirements. The BLDREP in its full or abbreviated form is used throughout all echelons of the blood management system. All MTF or medical treatment elements, including Echelon II, will use the standard BLDREP format. The Joint Interoperability Tactical Command and Control Systems' Automated Message Preparation System and the Message Text Format Editor are two software programs that may be available to automate the BLDREP formatting. Telephonic BLDREPs may be used

in theater. To help reduce the length of the messages, a master menu of BLDREP codes has been standardized as shown in Figure B-1.

a. The theater blood program manager may assign brevity codes and designate those lines to be utilized in daily reporting. Locations of activities will be reported only on the first report or upon relocation.

b. Requests for RBCs should normally be based on a random distribution of blood groups and types (that is, 40 percent O positive; 10 percent O negative; 35 percent A positive; 5 percent A negative; 8 percent B positive; and 2 percent B negative). At Echelons III and IV, group and type-specific RBCs should be transfused whenever possible. Certain designated MTFs will require Group O RBCs only. Upon activation, each MTF should request a base load of blood components.

c. Medical treatment facilities should submit a daily BLDREP to their blood supplier. A complete BLDREP should include the following:

- Heading of message: from and to addressees, information copy addressee(s), message classification, operation name, report identification, date and time of message, reference to other messages and the following lines:
  - Line 1, as of date/time group (ASOFDTG): date and time zone of the BLDREP.
  - Line 2, reporting unit (REPUNIT): name, designator code, and activity brevity code of the REPUNIT.
  - Line 3, blood inventory: Used to report the total number of each blood



## Appendix B

MASTER MENU CODES		
CATEGORY	CODE	DEFINITION
MAN MENT	A	Joint Blood Program Office
	B	Area Joint Blood Program Office
	C	Armed Services Whole Blood Processing Laboratory
	D	Blood donor center
	E	Blood products depot
	F	Blood transshipment center
	G	Blood supply unit
	H	Medical treatment facility
	I	Naval vessel
BLOOD PRODUCTS	J	Red blood cells
	K	Whole blood
	L	Frozen red blood cells
	M	Frozen plasma
	N	Platelets
	O	Cryoprecipitate
	P	To be determined
BLOOD GROUPS	Q	Random Group and Type O, A, B
	R	Random Group and Type O, A
	S	Random Type O
	T	Random Type A
	U	Random Type B
	V	Random Type AB
TIME FRAME	W	Required within 12 hours
	X	Required within 24 hours
	Y	Required within 48 hours
DISC REPOUS	Z	Not applicable or see remarks

*1. There currently are no frozen platelets. However, this code is used when dealing with platelet concentrates when they are pooled random donor platelets or platelet pheresis concentrates.*

Figure B-1. Master Menu Codes

product on hand at the end of the report period. Provide the REPUNIT code or name and activity code when reporting another blood program activity and/or unit. Total the blood products at the end of the reporting period.

•• Line 4, blood request: Used to report the total number of each blood product

requested and time frame needed. Provide the REPUNIT code or name and activity code when reporting another blood program activity and/or unit.

•• Line 5, blood expiration: Used to report the estimate of the number of each blood product which will expire within the next 7 days.

- Line 6, blood estimate: Used to report the estimate of the total number of each blood product required for resupply within the next 7 days. Provide the reporting code or name and activity code when reporting another blood program activity and/or unit (See Figure B-1).

- Line 7, CLOSTEXT or RMKS: Used to provide additional amplifying information if required.

- Line 8, DECL: Mandatory if the message is classified.

### 3. Transmission of the Blood Report

a. **Method.** Message is the primary method, with voice as alternate. Communications capabilities of originator and addressee, as well as urgency of the message subject and/or text material, will determine the method. Messages should be sent in immediate precedence because of short blood expiration dates. Correct plain language addresses from a current directory must be used. The BLDREPs may be transported by courier if that is more practical and expedient.

b. **Frequency.** Required as follows unless otherwise directed:

- MTF (including Echelon II) to blood donor unit: daily as of 2359Z; report required not later than 0400Z.
- BSU to an AJBPO: daily as of 2359Z; report required not later than 0400Z.
- BPD to an AJBPO: daily as of 2359Z; report required not later than 0400Z.
- BTC to an AJBPO: daily as of 2359Z; report required not later than 0400Z.
- AJBPO to JBPO: daily as of 0400Z; report required not later than 0800Z.

- JBPO to ASBPO: daily as of 0800Z; report required not later than 1200Z.

### 4. Blood Report Policies

a. Information copies should be kept to a minimum and be specifically required by the respective OPLAN. Increased quantities of information copies overload the message channels.

b. If an AJBPO is not established, the BSU and BTC will report directly to the JBPO.

c. The addressee will normally be the next higher organization level with whom the reporting unit (originator) is authorized direct communication: MTF to blood supplier; blood supplier to AJBPO (if established); blood supplier to JBPO (if AJBPO not established); BTC to JBPO (if AJBPO not established); AJBPO to JBPO (if AJBPO is established); JBPO to ASBPO.

d. A BSU of one Service component may receive blood reports from an MTF of another Service component when the BSU is in an area support role.

e. All BLDREPs should be classified at the lowest level required to meet operational constraints.

f. Each MTF, including those at Echelon II, will submit a BLDREP to the supporting BSU as required.

g. The BSU will submit a BLDREP to AJBPO on the status of blood components in the BSU, as required. Report will reflect BSU inventory and anticipated blood requirements.

h. The BTC blood manager will submit a BLDREP to the AJBPO on the status of blood components in the BTC.

## Appendix B

i. The BPD blood manager will submit a BLDREP to the AJBPO on the status of the blood components in the BPD.

j. The AJBPO will submit a BLDREP to the JBPO on the status of blood components in the BTCs and BSU, as required.

k. The JBPO will submit a consolidated BLDREP to the ASBPO on the status of blood components in each geographic combatant command Joint Blood Program area.

l. Examples of completed BLDREPs (message and voice) are shown in Figure B-2 and Figure B-3.

### 5. Blood Shipment Report

a. The BLDSHIPREP provides a standardized message format that is used worldwide in the ASBPOs to report blood shipments (See Figure B-4).

b. In lieu of standard nomenclature the respective JBPO may assign brevity codes for individual component blood program elements. The Joint Interoperability Tactical Command Automated Message Preparation and the MTF may be available to automate the BLDSHIPREP formatting. To reduce the length of the messages, a master menu of BLDSHIPREP codes has been standardized.

### EXAMPLE OF MESSAGE BLOOD REPORT

```
FM:CDR 51ST MEDGP OSAN KOR/BTC//  
TO: USFKSURGEON SEOUL KOR/KAJBPO//  
UNCLAS  
OPER/SMITH//  
MSGID/BLDREP/OSAN BTC/1012221//  
REF/A/CDRUSFK/090300ZJAN96/-NOTAL//  
ASOFTG/100001ZJAN96  
REPUNIT/BLUE1/F/OSAN KOR//  
BLDINVT/-/900JQ/60LS/60MV//  
RMKS/ONE WALK-IN REFRIGERATOR NEEDS REPAIR//  
FM:CDR 32ND MEDLOG BN  
TO:CDR JTF CHARLIE SURGEON//  
INFO:CDR 16MEDGRP//  
CONFIDENTIAL  
OPER/VALIANT ENTER//  
MDGID/BLDREP/BSU/100001ZJAN96//  
REF/A/CDRUSCOM/100001ZJAN96/-NOTAL//  
ASOFTG/100001ZJAN96  
REPUNIT/32ND MEDLOG BN//  
BLDINVT/-/900JQ/60LS/60MV//  
BLDEZP/-/30/30/30/30//  
BLDEZP/-/30/30/30/30//  
RMKS/COMPLETED 12 UNITS KQ BLOOD FOR EMERGENCY PLATELET  
REQUEST FOR 5TH EVAC HOSP.SHIPD 12 UNITS WHOLE BLOOD PLUS  
30 UNITS KQ TO 5TH EVAC THIS REPORTING PERIOD.  
DECLAS OADR
```

Figure B-2. Example of Message Blood Report

## Blood Management

These codes are the same as used for the BLDREP (See Figure B-2).

c. The heading of the BLDSHIPREP message includes: from and to addresses, information copy addressee(s), message classification, operation name, report identification, date and time of message, references to other messages, and the following lines:

- Line 1, ASOFTG: date and time zone of the blood shipment.
- Line 2, REPUNIT: name, designator code, activity brevity code of the REPUNIT, location of unit.
- Line 3, 1SHIPD: blood products, codes, and/or number of units shipped and/or total number of units shipped.

- Line 4, BLDSHIP: blood shipment or air bill control number, aircraft flight number, and/or estimated time of arrival.
- Line 5, POC: point of contact at shipping location (names, rank, phone number, location).
- Line 6, CLOSTEXT: additional comments, such as when the blood will need re-icing.
- Line 7, DECL: message downgrading instructions. Required if classified.

d. Example of a completed BLDSHIPREP is shown in Figure B-4.

### EXAMPLE OF VOICE BLOOD REPORT

BLUE THIS IS RED; BLOOD  
REPORT OVER  
THIS IS RED; IMMEDIATE,  
UNCLASSIFIED  
LINE 1: 102359Z  
LINE 2: 32CSH-H  
LINE 3: 100JS, 80JT, 20JR,  
50MV  
LINE 4: 100JQX  
LINE 5: 25JS, 5JT  
LINE 6: 700JQ  
LINE 7: RECEIVED 100JQ,  
TRANSFUSED 100JQ  
EXPIRED 10JS;  
REFRIGERATOR NEEDS  
REPAIR K

Figure B-3. Example of Voice Blood Report

## EXAMPLE OF BLOOD SHIPMENT REPORT

FR: CDR USAMEDDAC FT KNOX KY//HSLBB//  
TO: ASWBPL MDGUIRE AFB NJ  
INFO: CDRUSAHSC FT SAM HOUSTON TX/MCHO-CL-R//  
UNCLAS  
OPER/DULL BRASS//  
MSGID/BLDSHIPREP/FT KNOX BDC/10122ZJAN96  
REF/A/CDRUSAMEDCOM/090300ZJAN96/-NOTAL//  
ASOFDTG/100001ZJAN96//  
REPUNIT/CMBC/D/FT KNOX KY//  
ISHIPD  
/DP/OPOS/ONEG/APOS/ANEG/BPOS/BNEG/ABPOS/ABNEG/TOTAL//  
/J160/140/32/40/20/8/0/0/400//  
/M/0/0/0/0/0/24/0/24//  
BLDSHIP/AB12134/DELTA32/101500ZJAN96/14//  
POXNEVAREZZ/35G/PRIPHIN:DSN555-1212/FT LMPX LUSE[UM]555-  
1213//  
CLOSTEXT/BLOOD NEEDS RE-ICED BY 130001AJAN96/CMBC SHIPMENT  
NO1//

Figure B-4. Example of Blood Shipment Report

---

## APPENDIX C

### MEDICAL LOGISTICAL SYSTEMS FOR BATTLEFIELD INTEROPERABILITY

**1.** Interoperability among the Services is of paramount importance to the successful completion of a joint mission. The often mentioned interoperability problem on after-action reports is a shortcoming of the MEDLOG communications system. The MEDLOG problems encountered by all joint US forces, especially when supported by the SIMLM concept during the Gulf War, once again highlighted the same communications and interoperability issues that have always plagued HSLS. These HSLS issues have proven to be most difficult in finding a permanent fix that meets all needs, gains the approval of all of the Services, and is affordable to implement. Communication issues have received much attention at all levels of command. All four Services have conducted extensive interoperability testing since the Gulf War.

**2.** The intent of this appendix is to acquaint HSLS personnel with what works today in the critical area of MEDLOG interoperability. The most current information on communications is presented in this publication. These procedures will work in time of war or MOOTW and during a national emergency within CONUS or US territories. Emerging technology will keep this topic in a constant state of change for the foreseeable future; it will not stay static. Service components are now able to transmit and receive medical requisition files and/or statuses that are in a compatible and interoperable format within the respective Service MEDLOG AIS.

**3.** Prototype systems have been tested and refined for battlefield MEDLOG systems interoperability and use the DAASO as the MEDLOG AIS communications focal point. Each of the Services sends and receives

requisitions and supply statuses using Defense Data Network, land lines, or satellite communications to the Defense Automatic Addressing System (DAAS) located in Dayton, Ohio. DAAS routes all the transactions according to DOD rules.

**4.** Each of the Services incorporates either of two software communication packages for communicating with the DAASO, which has a mailbox service within the DAASO DAAS Automated Message Exchange System (DAMES). The DAMES and the SALTS, which supports standard USN logistics and administrative systems provide the communications software necessary to provide MEDLOG interoperability via the DAASO.

a. The DAASO routinely provides the following services: receives, processes, routes, and transmits supply requisitions and related information; determines sources of both depot and commercial supplies; provides an on-line redistribution network for materials; provides users with up-to-date status of requirements; analyzes databases and prepares logistics reports; customizes reporting as requested; and maintains official repository for logistics-related databases and publications.

b. DAMES and SALTS software on a unit PC provides the capability to communicate with DAAS, sending and receiving logistics transactions and narrative text through a modem using standard telephone lines and/or via military or civilian satellite systems.

- Each Service requisitioning element is assigned a separate mailbox at DAASO. Their Department of Defense activity address code (DODAAC) is then

## Appendix C

matched to the mailbox and their messages are stored. A group of DODAACs may be assigned to a single mailbox, if necessary.

- Messages and/or files received and transmitted by DAAS follow the Joint Army, Navy, Air Force Publication (JANAP) 128 procedures. DAMES transaction files, produced by user programs, are built into standard JANAP-data pattern, formatted communications messages for transmission. Messages containing narrative text, messages containing MILSTRIP logistics transactions, and messages containing nonstandard part number requisitions may also be built interactively at the keyboard.

c. Protocols for use of SALTS software can be found in USN procedural guides.

d. DAASO supplies the DAMES software after units register and are assigned DAMES mailboxes. The DAMES user can communicate with DAAS using either asynchronous protocol at 1200 baud to 9600 baud or bisynchronous 2780 or 3780 protocol at 2400 or 4800 baud. The software used to create messages for transmission and the software used to process received messages is the same in both the DAMES asynchronous package and the DAMES bisynchronous package. The main difference in the two packages is the actual communications software.

e. The DAMES general system requirements are a PC system capable of running MS-DOS and a minimum of 256 K RAM; hard disk drive; printer (configure as LPT1); modem; and access to a telephone line.

f. The transactions to be sent through DAAS can be loaded on to the DAMES PC using a floppy from the respective Service MEDLOG AIS. The transactions will be an

American Standard Code for Information Exchange (ASCII) formatted file on a disk. If the PC is on a local area network, the transactions can be transferred to the DAMES PC using a file transfer utility. The ASCII file in both approaches has one transaction per line separated by hard returns. DAMES can accept the transaction file with or without the JANAP headers and trailers included in the file. The DAMES software first sends transactions that are waiting on the PC. After sending the transactions through DAMES to DAAS, DAMES then checks for transactions in the mailbox at DAAS to pull back to the PC. A DAMES user may also dial in to check and/or download their mailbox without having any transactions to send.

5. Communications software packages can reside on the Services' MEDLOG system or on a separate DOD-based PC. A modem provides communications across land lines or satellite connections.

6. Several issues are raised concerning the use of commercial satellite for transmitting medical information in support of military operations. The medical information passed is by commercial satellites because military satellites systems become saturated with traffic of higher priority than medical information. The primary commercial satellite system used by the military is through Communications Satellite Corporation, which is the US signatory to the Convention on the International Maritime Satellite Organization Treaty. The international satellite system:

a. Offers analog voice and data service on a global basis. Has digital voice capability on a soon-to-be global basis.

b. Is used extensively by the USN, though it is not limited to maritime purposes.

c. Is intended to support peaceful operations, though its use was approved when

---

## Medical Logistical Systems for Battlefield Interoperability

---

under the auspices of the United Nations Council Organization.

d. Article 34 of the 1949 Geneva Convention for the Amelioration of the Condition of Wounded, Sick, and Shipwrecked Members of the Armed Forces at Sea provides that "hospital ships may not possess or use encryption for their wireless or other means of communications." All communication security hardware would be

removed from the hospital ships and stored in order to comply with this regulation.

Hospital ships may continue to utilize satellite systems in a nonencrypted mode.

7. Processing rules for DOD users to interface through the DAAS are found in DOD Directive 4000.25-1-M, "Military Standard Requisitioning and Issuing Procedures (MILSTRIP)."



## Appendix C

---

Intentionally Blank

---

## APPENDIX D

### REFERENCES

The development of Joint Pub 4-02.1 is based upon the following primary references:

#### 1. US Code (Armed Forces).

Title 10, United States Code — Armed Forces. (As amended by DOD Reorganization Act of 1986)

#### 2. Multinational Documents.

NATO  
STANAG

TITLE

288	Intravenous Replacement Fluids
289	Minimum Essential Characteristics of Blood Products Shipping Containers
2061	Procedures for Disposition of Allied Patients By Medical Installations
2068	Emergency War Surgery
2105	NATO Table of Medical Equivalents AMEDP1-(D)
2122	Medical Training in First-Aid, Basic Hygiene, and Emergency Care
2126	First-Aid Kits and Emergency Medical Care Kits
2127	Medical, Surgical, and Dental Instruments, Equipment, and Supplies
2135	Procedures for Emergency Logistic Assistance
2342	Minimum Essential Medical Equipment and Supplies for Motor Ambulances at All Levels
2367	Minimum Essential Medical Supply Items in Theaters of Operations
2907	Procedures for Reporting and for Initial Disposition of Unsatisfactory Medical Materiel and Drugs
2939	Medical Requirements for Blood, Blood Donors, and Associated Equipment
3204	Aeromedical Evacuation

ABCA  
QSTAG

TITLE

815	Blood Supply in the Area of Operations (AO)
850	Blood Donor and Transfusion Equipment Requirements-Amendment No. 2

#### 3. Department of Defense Directives.

a. DOD 4000.25-1-M, "Military Standard Requisitioning and Issue Procedures (MILSTRIP)."

b. DOD 6000.12, "Health Services Operations and Readiness."

c. DOD 6420.1, "Organization and Functions of the Armed Forces Medical Intelligence Center (AFMIC)."

---

## Appendix D

---

- d. DODI 6480.4, “Armed Services Blood Program (ASBP) Operational Procedures.”

### **4. Joint Publications.**

- a. Joint Pub 0-2, “Unified Action Armed Forces (UNAAF).”
- b. Joint Pub 3-0, “Doctrine for Joint Operations.”
- c. Joint Pub 3-05.3, “Joint Special Operations Operational Procedures.”
- d. Joint Pub 3-07, “Joint Doctrine for Military Operations Other Than War.”
- e. Joint Pub 3-07.3, “Joint Tactics, Techniques, and Procedures for Peacekeeping Operations.”
- f. Joint Pub 3-07.7, “Joint Tactics, Techniques, and Procedures for Domestic Support Operations.”
- g. Joint Pub 4-0, “Doctrine for Logistic Support of Joint Operations.”
- h. Joint Pub 4-01, “Joint Doctrine for the Defense Transportation System.”
- i. Joint Pub 4-02, “Doctrine for Health Service Support in Joint Operations.”
- j. Joint Pub 4-02.2, “Joint Tactics, Techniques, and Procedures for Patient Movement in Joint Operations.”
- k. Joint Pub 5-03.1, “Joint Operation Planning and Execution System, Vol. I: (Planning Policies and Procedures).”
- l. CJCSM 3122.03, “Joint Operation Planning and Execution System, Vol. II: (Planning Formats and Guidance).”

### **5. Air Force Regulations.**

- a. AFMAN 23-110, Vol. 5, “USAF Supply Manual.”
- b. AFI 41-106, “Medical Readiness Planning and Training.”
- c. DTIC REF A 186 280, “Logistical Support for LIC, An Air Force Perspective.”
- d. AFM 167-230, “Medical Logistics System (MEDLOG)— Air Force Medical Logistics Office.”

### **6. Army Regulations.**

Army Regulation 40-61, “Medical Logistics Policies and Procedures,” 1 August 1989.

---

## References

---

### 7. Multi-Service Publications.

TM 8-227-11, NAVMED P-5123/AFI 44-118, "Operational Procedures for the Armed Services Blood Program Elements," 1 September 1995.

### 8. US Army Field Manuals.

- a. FM 8-10, "Health Service Support in a Theater of Operations," 1 March 1991.
- b. FM 8-42, "Medical Operations in Low Intensity Conflict," 4 December 1990.
- c. FM 8-55, "Planning For Health Service Support," 15 January 1994.
- d. FM 55-12, "Movement of Units in Air Force Aircraft," 22 July 1986.
- e. FM 100-5, "Operations," 14 June 1993.
- f. FM 100-10, "Combat Service Support," 18 February 1988.
- g. FM 100-17, "Mobilization, Deployment, Redeployment, Demobilization," 28 October 1992.
- h. FM 100-20, "Military Operation in Low Intensity Conflict," 5 December 1990.
- i. FM 101-5, "Staff Organization and Operations."
- j. FM 101-10-1, "Organizational, Technical, and Logistical Data, Planning Factors," 7 October 1987.

### 9. US Navy and Marine Corps Publications.

- a. FMFM 4, "Combat Service Support."
- b. FMFM 4-50, "Health Service Support," 19 September 1990.
- c. FMFM 4-51/NAVMED P-5133, "Task Force Medical Regulating Manual."
- d. CGSC 100-1, "Navy and Marine Corps."
- e. MCBUL 4790, "Maintenance Management of Marine Corps Class VIII (Medical/Dental) Equipment."

---

## Appendix D

---

Intentionally Blank

## APPENDIX E

### ADMINISTRATIVE INSTRUCTIONS

#### 1. User Comments

Users in the field are highly encouraged to submit comments on this publication to the Joint Warfighting Center, Attn: Doctrine Division, Fenwick Road, Bldg 96, Fort Monroe, VA 23651-5000. These comments should address content (accuracy, usefulness, consistency, and organization), writing, and appearance.

#### 2. Authorship

The lead agent for this publication is the United States Army. The Joint Staff doctrine sponsor for this publication is the Director for Logistics (J-4).

#### 3. Change Recommendations

- a. Recommendations for urgent changes to this publication should be submitted:

TO: HQDA WASHINGTON DC/DASG-HCD-D//  
INFO: JOINT STAFF WASHINGTON DC//J7-JDD//

Routine changes should be submitted to the Director for Operational Plans and Interoperability (J-7), JDD, 7000 Joint Staff Pentagon, Washington, DC 20318-7000.

- b. When a Joint Staff directorate submits a proposal to the Chairman of the Joint Chiefs of Staff that would change source document information reflected in this publication, that directorate will include a proposed change to this publication as an enclosure to its proposal. The Military Services and other organizations are requested to notify the Director, J-7, Joint Staff, when changes to source documents reflected in this publication are initiated.

- c. Record of Changes:

CHANGE NUMBER	COPY NUMBER	DATE OF CHANGE	DATE ENTERED	POSTED BY	REMARKS

---

## Appendix E

---

### 4. Distribution

- a. Additional copies of this publication can be obtained through Service publication centers.
- b. Only approved pubs and test pubs are releasable outside the combatant commands, Services, and Joint Staff. Release of any classified joint publication to foreign governments or foreign nationals must be requested through the local embassy (Defense Attache Office) to DIA Foreign Liaison Office, PSS, Room 1A674, Pentagon, Washington, DC 20301-7400.
- c. Additional copies should be obtained from the Military Service assigned administrative support responsibility by DOD Directive 5100.3, 1 November 1988, "Support of the Headquarters of Unified, Specified, and Subordinate Joint Commands."

#### By Military Services:

Army:	US Army AG Publication Center SL 1655 Woodson Road Attn: Joint Publications St. Louis, MO 63114-6181
Air Force:	Air Force Publications Distribution Center 2800 Eastern Boulevard Baltimore, MD 21220-2896
Navy:	CO, Naval Inventory Control Point 700 Robbins Avenue Bldg 1, Customer Service Philadelphia, PA 19111-5099
Marine Corps:	Marine Corps Logistics Base Albany, GA 31704-5000
Coast Guard:	Coast Guard Headquarters, COMDT (G-OPD) 2100 2nd Street, SW Washington, DC 20593-0001

- d. Local reproduction is authorized and access to unclassified publications is unrestricted. However, access to and reproduction authorization for classified joint publications must be in accordance with DOD Regulation 5200.1-R.

## GLOSSARY

### PART I—ABBREVIATIONS AND ACRONYMS

AABB	American Association of Blood Banks
ABO	blood typing system
ADAL	authorized dental allowance list
AE	aeromedical evacuation
AFMLO	Air Force Medical Logistics Office
AFWCF	Air Force Working Capital Fund
AIS	automated information systems
AJBPO	Area Joint Blood Program Office
AMAL	authorized medical allowance list
AOR	area of responsibility
AR	Army reserve
ASBP	Armed Services Blood Program
ASBPO	Armed Service Blood Program Office
ASCII	American Standard Code for Information Exchange
ASD(HA)	Assistant Secretary of Defense for Health Affairs
ASOFDTG	as of date/time group
ASWBPL	Armed Services Whole Blood Processing Laboratory
ATH	air transportable hospital
BAS	battalion aid station
BDC	blood donor center
BLDREP	blood report
BLDSHIPREP	blood shipment report
BPD	Blood Product Depot
BSU	blood supply unit
BTC	blood transshipment center
C	Centigrade
CH	contingency hospital
CINC	commander of a combatant command
CJCS	Chairman of the Joint Chiefs of Staff
CLF	combat logistics force
COMMZ	communications zone
CONUS	continental United States
CSS	combat service support
DAAS	Defense Automatic Addressing System
DAASO	Defense Automatic Addressing System Office
DAMES	DAAS Automated Message Exchange System
DEPMEDS	Deployable Medical Systems
DHHS	Department of Health and Human Services
DLA	Defense Logistics Agency
DMSB	Defense Medical Standardization Board
DMSO	Division Medical Supply Office



## Glossary

---

DOD	Department of Defense
DODAAC	Department of Defense activity address code
DPSC	Defense Personnel Support Center
EPW	enemy prisoner of war
ESF	emergency support function
FDA	Food and Drug Administration
FFP	fresh frozen plasma
FISC	Fleet and Industrial Supply Centers
FSSG	force service support group
HN	host nation
HSLS	health service logistics support
HSS	health service support
JANAP	Joint Army, Navy, Air Force Publication
JBPO	Joint Blood Program Office
JFC	joint force commander
JFS	joint force surgeon
JOPES	Joint Operation Planning and Execution System
JTF	joint task force
LOC	line of communications
MAGTF	Marine air-ground task force
MEDLOG	medical logistics (USAF AIS)
MEDLOGCO	medical logistics company
MEDLOG JR	medical logistics, junior (USAF AIS)
MEF	Marine expeditionary force
MICRO-MICS	Micro-Medical Inventory Control System
MICRO-SNAP	Micro-Shipboard Non-Tactical Automated Data Processing System
MILSTRIP	military standard requisitioning and issue procedures
MOMEDLOG	mobile medical logistics (USAF AIS)
MOOTW	military operations other than war
MTF	medical treatment facility
NATO	North Atlantic Treaty Organization
NAVMEDLOGCOM	Naval Medical Logistics Command
NAVSUP	Naval Supply Systems Command
NBC	nuclear, biological, and chemical
NDMS	National Disaster Medical System
NEO	noncombatant evacuation operation
NGO	nongovernmental organization
O&M	operation and maintenance
OFHIS	Operational Fleet Hospital Information System

## Glossary

---

OPLAN	operation plan
PC	personal computer
PECK	patient evacuation contingency kit
PMI	patient movement item
POD	port of debarkation
POE	port of embarkation
RAA	redeployment assembly area
RBC	red blood cell
REPUNIT	reporting unit
Rh	Rhesus
ROE	rules of engagement
SALTS	Streamlined Automated Logistics Transfer System
SASSY	Supported Activities Supply System
SIMLM	single integrated medical logistics manager
SMU	SASSY management unit
SOF	special operations forces
T-AH	hospital ship
TBTC	transportable blood transshipment center
TMMMC	Theater Medical Materiel Management Center
TPFDD	time-phased force and deployment data
USAF	United States Air Force
USAMMA	United States Army Medical Materiel Agency
USMC	United States Marine Corps
USN	United States Navy
WR	war reserve

## PART II—TERMS AND DEFINITIONS

**aeromedical evacuation.** The movement of patients under medical supervision to and between medical treatment facilities by air transportation. Also called AE. (Joint Pub 1-02)

**aeromedical evacuation system.** A system which provides: a. control of patient movement by air transport; b. specialized medical attendants and equipment for in-flight medical care; c. facilities on or in the vicinity of air strips and air bases, for the limited medical care of intransit patients entering, en route via, or leaving the system; and d. communication with originating, destination, and en route medical facilities concerning patient transportation. (Joint Pub 1-02)

**clinic.** A medical treatment facility primarily intended and appropriately staffed and equipped to provide outpatient medical service for nonhospital type patients. Examination and treatment for emergency cases are types of the services rendered. A clinic is also intended to perform certain nontherapeutic activities related to the health of the personnel served, such as physical examinations, immunizations, medical administration, and other preventive medical and sanitary measures necessary to support a primary military mission. A clinic will be equipped with the necessary supporting services to perform the assigned mission. A clinic may be equipped with beds (normally fewer than 25) for observation of patients awaiting transfer to a hospital and for care of cases which cannot be cared for on an outpatient status, but which do not require hospitalization. Patients whose expected duration of illness exceeds 72 hours will not normally occupy clinic beds for periods longer than necessary to arrange transfer to a hospital. (Joint Pub 1-02)

**evacuation.** 1. The process of moving any person who is wounded, injured, or ill to and/or between medical treatment facilities. 2. The clearance of personnel, animals, or materiel from a given locality. 3. The controlled process of collecting, classifying, and shipping unserviceable or abandoned materiel, United States and foreign, to appropriate reclamation, maintenance, technical intelligence, or disposal facilities. (Joint Pub 1-02)

**evacuation policy.** 1. Command decision indicating the length in days of the maximum period of noneffectiveness that patients may be held within the command for treatment. Patients who, in the opinion of responsible medical officers, cannot be returned to duty status within the period prescribed are evacuated by the first available means, provided the travel involved will not aggravate their disabilities. 2. A command decision concerning the movement of civilians from the proximity of military operations for security and safety reasons and involving the need to arrange for movement, reception, care, and control of such individuals. 3. Command policy concerning the evacuation of unserviceable or abandoned materiel and including designation of channels and destinations for evacuated materiel, the establishment of controls and procedures, and the dissemination of condition standards and disposition instructions. (Joint Pub 1-02)

**health service logistics support.** A functional area of logistics support that supports the joint force surgeon's health service support mission. It includes supplying Class VIII medical supplies (medical materiel to include medical peculiar repair parts used to sustain the health service support system), optical

---

## Glossary

---

fabrication, medical equipment maintenance, blood storage and distribution, and medical gases. Also called HSLS. (This term and its definition is approved for inclusion in the next edition of Joint Pub 1-02.)

**health service support.** All services performed, provided, or arranged by the Services to promote, improve, conserve, or restore the mental or physical well-being of personnel. These services include, but are not limited to, the management of health services resources, such as manpower, monies, and facilities; preventive and curative health measures; evacuation of the wounded, injured, or sick; selection of the medically fit and disposition of the medically unfit; blood management; medical supply, equipment, and maintenance thereof; combat stress control; and medical, dental, veterinary, laboratory, optometric, medical food, and medical intelligence services. (Joint Pub 1-02)

**hospital.** A medical treatment facility capable of providing inpatient care. It is appropriately staffed and equipped to provide diagnostic and therapeutic services, as well as the necessary supporting services required to perform its assigned mission and functions. A hospital may, in addition, discharge the functions of a clinic. (Joint Pub 1-02)

**humanitarian assistance.** Programs conducted to relieve or reduce the results of natural, or manmade disasters or other endemic conditions such as human pain, disease, hunger, or privation that might present a serious threat to life or that can result in great damage to or loss of property. Humanitarian assistance provided by US Forces is limited in scope and duration. The assistance provided is designed to supplement or complement the efforts of the host nation civil authorities or agencies

that may have the primary responsibility for providing humanitarian assistance. (Joint Pub 1-02)

**intertheater evacuation.** Evacuation of patients between the originating theater and points outside the theater, to include the continental United States and other theaters. En route care is provided by trained medical personnel. (Joint Pub 1-02)

**intratheater evacuation.** Evacuation of patients between points within the theater. En route care is provided by trained medical personnel. (Joint Pub 1-02)

**joint force.** A general term applied to a force composed of significant elements, assigned or attached, of two or more Military Departments, operating under a single joint force commander. (Joint Pub 1-02)

**joint force commander.** A general term applied to a combatant commander, subunified commander, or joint task force commander authorized to exercise combatant command (command authority) or operational control over a joint force. Also called JFC. (Joint Pub 1-02)

**joint force surgeon.** A general term applied to an individual appointed by the joint force commander to serve as the theater or joint task force special staff officer responsible for establishing, monitoring, or evaluating joint force health service support. (Joint Pub 1-02)

**medical intelligence.** That category of intelligence resulting from collection, evaluation, analysis, and interpretation of foreign medical, bioscientific, and environmental information which is of interest to strategic planning and to military medical planning and operations for the conservation of the fighting strength of friendly forces and the formation of

## Glossary

---

assessments of foreign medical capabilities in both military and civilian sectors. (Joint Pub 1-02)

**medical regulating.** The actions and coordination necessary to arrange for the movement of patients through the levels of care. This process matches patients with a medical treatment facility which has the necessary health service support capabilities, and it also ensures that bed space is available. (Joint Pub 1-02)

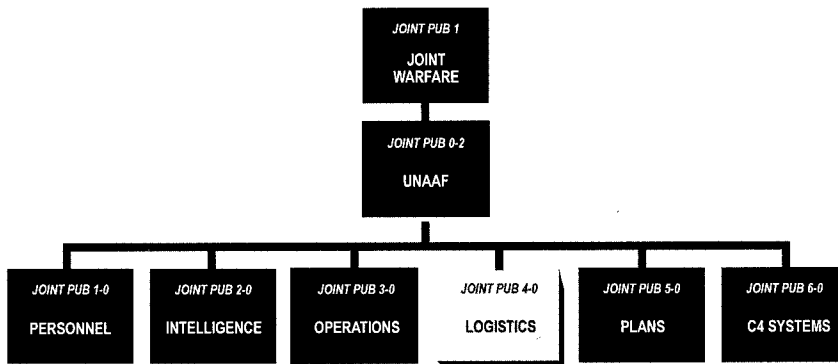
**medical treatment facility.** A facility established for the purpose of furnishing

medical and/or dental care to eligible individuals. (Joint Pub 1-02)

**patient.** A sick, injured, wounded, or other person requiring medical/dental care or treatment. (Joint Pub 1-02)

**triage.** The evaluation and classification of casualties for purposes of treatment and evacuation. It consists of the immediate sorting of patients according to type and seriousness of injury, and likelihood of survival, and the establishment of priority for treatment and evacuation to assure medical care of the greatest benefit to the largest number. (Joint Pub 1-02)

## JOINT DOCTRINE PUBLICATIONS HIERARCHY



All joint doctrine and tactics, techniques, and procedures are organized into a comprehensive hierarchy as shown in the chart above. Joint Pub 4-02.1 is in the Logistics series of joint doctrine publications. The diagram below illustrates an overview of the development process:

